

	<110>	Malouf, Nadia		
		Nichols, Timothy		
	<120>	Purified and Isolated Platelet Calcium Channel Nucleic Acids and		
		Polypeptides and Therapeutic and Screening Methods Using Same		
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	Met Ala Thr Gly Gln Ala Leu Gly Asp Ala Cys Gln Met Glu Pro	
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	1805 1810 1815	
	gcc cca gac ggc atg gcc agc tcc ctg gga tgc ctg aac ctc ggg	5499
	Ala Pro Asp Gly Met Ala Ser Ser Leu Gly Cys Leu Asn Leu Gly	
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	Ser Ser Leu Gly Ser Leu Asp Gln His Gln Gly Ser Gln Glu Thr	
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25	Cys Leu Thr Leu Glu Asn Pro Leu Arg Lys Ala Cys Ile Ser Ile Val	
	35 40 45	
	Glu Trp Lys Pro Phe Glu Thr Ile Ile Leu Leu Thr Ile Phe Ala Asn	
	50 55 60	
30	Cys Val Ala Leu Ala Val Tyr Leu Pro Met Pro Glu Asp Asp Asn Asn	
	65 70 75 80	
	Ser Leu Asn Leu Gly Leu Glu Lys Leu Glu Tyr Phe Phe Leu Ile Val	
	85 90 95	
	Phe Ser Ile Glu Ala Ala Met Lys Ile Ile Ala Tyr Gly Phe Leu Phe	
	100 105 110	
35	His Gln Asp Ala Tyr Leu Arg Ser Gly Trp Asn Val Leu Asp Phe Thr	
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	Ile Val Phe Leu Gly Val Phe Thr Val Ile Leu Glu Gln Val Asn Val	
	130 135 140	

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15 Ser Asn His Ser Asn Ser His Val Phe Ser Ser Val His Tyr Glu
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20 25 30

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Pro Leu Ser Gly Glu Gly Pro Thr Ser Gln Pro Asn Ser Ser Lys Gln
35 40 45

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Ala Phe Arg Val Leu Arg Pro Leu Arg Leu Val Ser Gly Val Pro Ser
245 250 255

Leu Gln Val Val Leu Asn Ser Ile Ile Lys Ala Met Val Pro Leu Leu
260 265 270

5 His Ile Ala Leu Leu Val Leu Phe Val Ile Ile Ile Tyr Ala Ile Ile
275 280 285

Gly Leu Glu Leu Phe Ile Gly Lys Met His Lys Thr Cys Phe Phe Ala
290 295 300

10 Asp Ser Asp Ile Val Ala Glu Glu Asp Pro Ala Pro Cys Ala Phe Ser
305 310 315 320

Gly Asn Gly Arg Gln Cys Thr Ala Asn Gly Thr Glu Cys Arg Ser Gly
325 330 335

Trp Val Gly Pro Asn Gly Gly Ile Thr Asn Phe Asp Asn Phe Ala Phe
340 345 350

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40 Ala Lys Leu Xaa Ile Asp Glu Xaa Glu Ser Asn Val Asn Glu Val Lys
35 40 45

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	Pro 65	Glu	Ile	Pro	Leu	Ser 70	Pro	Arg	Pro	Arg	Pro 75	Leu	Ala	Glu	Leu	Gln 80
5	Leu	Lys	Glu	Lys	Ala 85	Val	Pro	Ile	Pro	Glu 90	Ala	Ser	Ser	Phe	Phe 95	Ile
	Phe	Ser	Pro	Thr 100	Asn	Lys	Ile	Arg	Val 105	Leu	Cys	His	Arg	Ile 110	Val	Asn
10	Ala	Thr	Trp 115	Phe	Thr	Asn	Phe	Ile 120	Leu	Leu	Phe	Ile	Leu 125	Leu	Ser	Ser
	Ala 130	Ala	Leu	Ala	Ala	Glu	Asp 135	Pro	Ile	Arg	Ala	Asp 140	Ser	Met	Arg	Asn
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Cys Tyr Ile Pro Lys Asn Pro Tyr Gln Tyr Gln Val Trp Tyr Ile Val
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40	cct	ctg	ggc	ttt	ggg	aag	ttc	tgc	cca	cat	cgg	gta	gct	tgt	aag	4563
	Pro	Leu	Gly	Phe	Gly	Lys	Phe	Cys	Pro	His	Arg	Val	Ala	Cys	Lys	
				1435					1440					1445		
45	cgg	ctg	gtg	ggc	atg	aac	atg	ccc	ctg	aac	agc	gac	ggc	aca	gtc	4608
	Arg	Leu	Val	Gly	Met	Asn	Met	Pro	Leu	Asn	Ser	Asp	Gly	Thr	Val	
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	acc ttc aat gcc	aca ctc ttt gcc ctg	gtc cgc acg gca ctc aag	4653
	Thr Phe Asn Ala	Thr Leu Phe Ala Leu	Val Arg Thr Ala Leu Lys	
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5	atc aag acg gaa	ggt aac ttt gag cag	gcc aac gag gag ctg agg	4698
	Ile Lys Thr Glu	Gly Asn Phe Glu Gln	Ala Asn Glu Glu Leu Arg	
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	gcc atc atc aag	aag atc tgg aag aga	acc agc atg aag ctc ttg	4743
	Ala Ile Ile Lys	Lys Ile Trp Lys Arg	Thr Ser Met Lys Leu Leu	
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10	gac cag gtc atc	cct cca ata gga gat	gat gag gtg aca gtg ggg	4788
	Asp Gln Val Ile	Pro Pro Ile Gly Asp	Asp Glu Val Thr Val Gly	
	1510	1515	1520	
15	aag ttc tac gcc	aca ttc ctc atc cag	gag cac ttc cgg aag ttc	4833
	Lys Phe Tyr Ala	Thr Phe Leu Ile Gln	Glu His Phe Arg Lys Phe	
	1525	1530	1535	
	atg aaa cgc caa	gag gag tat tat ggc	tat cgg ccc aag aag gac	4878
	Met Lys Arg Gln	Glu Glu Tyr Tyr Gly	Tyr Arg Pro Lys Lys Asp	
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	Ile Val Gln Ile	Gln Ala Gly Leu Arg	Thr Ile Glu Glu Glu Ala	
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	Ala Pro Glu Ile	Cys Arg Thr Val Ser	Gly Asp Leu Ala Ala Glu	
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25	gag gag ctg gag	aga gcc atg gtg gag	gct gcg atg gag gag ggg	5013
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	Ile Phe Arg Arg	Thr Gly Gly Leu Phe	Gly Gln Val Asp Asn Phe	
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	ctg gaa agg acc	aac tcc ctg ccc cct	gtc atg gcc aat cag aga	5103
	Leu Glu Arg Thr	Asn Ser Leu Pro Pro	Val Met Ala Asn Gln Arg	
	1615	1620	1625	
35	ccc ctc cag ttt	gct gag ata gag atg	gaa gag atg gag tca cct	5148
	Pro Leu Gln Phe	Ala Glu Ile Glu Met	Glu Glu Met Glu Ser Pro	
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	gtc ttc ttg gag	gac ttc cca caa gat	cca cgc acc aac ccc ctg	5193
	Val Phe Leu Glu	Asp Phe Pro Gln Asp	Pro Arg Thr Asn Pro Leu	
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40	gct cgt gcc aat	acc aac aat gcc aac	gcc aat gtc gcc tat gcg	5238
	Ala Arg Ala Asn	Thr Asn Asn Ala Asn	Ala Asn Val Ala Tyr Ala	
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45	aac agc aac cat	agc aac agc cat gtg	ttt tcc agt gtc cac tat	5283
	Asn Ser Asn His	Ser Asn Ser His Val	Phe Ser Ser Val His Tyr	
	1675	1680	1685	

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	Glu Arg Glu Phe Pro Glu Glu Thr Glu Thr Pro Ala Thr Arg Gly	
	1690 1695 1700	
5	cga gcc ctt ggc caa ccc tgc agg tcc ctg gga ccc cac agc aaa	5373
	Arg Ala Leu Gly Gln Pro Cys Arg Ser Leu Gly Pro His Ser Lys	
	1705 1710 1715	
	ccc tgt gtg gag atg ctg aag gga ctg ctg acc cag agg gca atg	5418
	Pro Cys Val Glu Met Leu Lys Gly Leu Leu Thr Gln Arg Ala Met	
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	Pro Arg Gly Gln Ala Pro Pro Ala Pro Cys Gln Cys Pro Arg Val	
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	Glu Ser Ser Met Pro Glu Asp Arg Lys Ser Ser Thr Pro Gly Ser	
	1750 1755 1760	
	ctt cat gag gag aca ccc cac agc agg agc acc agg gag aat act	5553
	Leu His Glu Glu Thr Pro His Ser Arg Ser Thr Arg Glu Asn Thr	
	1765 1770 1775	
20	tcc agg tgc tca gca cca gct aca gcc ctg ctg atc caa aag gct	5598
	Ser Arg Cys Ser Ala Pro Ala Thr Ala Leu Leu Ile Gln Lys Ala	
	1780 1785 1790	
	ctg gtt cga ggg ggc ctg ggc acc ttg gca gct gat gca aac ttc	5643
	Leu Val Arg Gly Gly Leu Gly Thr Leu Ala Ala Asp Ala Asn Phe	
	1795 1800 1805	
25	atc atg gca aca ggc cag gcc ctc gga gat gcc tgc caa atg gaa	5688
	Ile Met Ala Thr Gly Gln Ala Leu Gly Asp Ala Cys Gln Met Glu	
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	Pro Glu Glu Val Glu Ile Met Ala Thr Glu Leu Leu Lys Gly Arg	
	1825 1830 1835	
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	Glu Ala Pro Asp Gly Met Ala Ser Ser Leu Gly Cys Leu Asn Leu	
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	Gly Ser Ser Leu Gly Ser Leu Asp Gln His Gln Gly Ser Gln Glu	
	1855 1860 1865	
	acc ctt att cct cca agg ctg tga tgccacaca gcatcagcat gggcttagag	5877
	Thr Leu Ile Pro Pro Arg Leu	
	1870	
40	ctggcatgac caatgggggt ggggaagttg ctggggtgga gaagggttag cccaccgcag	5937
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   <213> Homo sapiens
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10 Lys Lys Pro Val Pro Glu Ile Leu Pro Arg Pro Pro Arg Ala Leu Phe
20 25 30

Cys Leu Thr Leu Glu Asn Pro Leu Arg Lys Ala Cys Ile Ser Ile Val
35 40 45

Glu Trp Lys Pro Phe Glu Thr Ile Ile Leu Leu Thr Ile Phe Ala Asn
50 55 60

15 Cys Val Ala Leu Ala Val Tyr Leu Pro Met Pro Glu Asp Asp Asn Asn
65 70 75 80

Ser Leu Asn Leu Gly Leu Glu Lys Leu Glu Tyr Phe Phe Leu Ile Val
85 90 95

20 Phe Ser Ile Glu Ala Ala Met Lys Ile Ile Ala Tyr Gly Phe Leu Phe
100 105 110

His Gln Asp Ala Tyr Leu Arg Ser Gly Trp Asn Val Leu Asp Phe Thr
115 120 125

Ile Val Phe Leu Gly Val Phe Thr Val Ile Leu Glu Gln Val Asn Val
130 135 140

25 Ile Gln Ser His Thr Ala Pro Met Ser Ser Lys Gly Ala Gly Leu Asp
145 150 155 160

Val Lys Ala Leu Arg Ala Phe Arg Val Leu Arg Pro Leu Arg Leu Val
165 170 175

30 Ser Gly Val Pro Ser Leu Gln Val Val Leu Asn Ser Ile Phe Lys Ala
180 185 190

Met Leu Pro Leu Phe His Ile Ala Leu Leu Val Leu Phe Met Val Ile
195 200 205

Year	Age	Sex	Weight (kg)	Height (cm)	Body Mass Index (kg/m ²)	Waist Circumference (cm)	Waist-Hip Ratio	Trunk Fat (%)	Visceral Fat (cm)	Subcutaneous Fat (cm)	Visceral Fat Index (VFI)	Subcutaneous Fat Index (SFI)	Visceral Fat to Subcutaneous Fat Ratio (V/S)
1995	25	M	75	175	24.5	95	0.92	15	10	5	0.15	0.05	3.0
1996	26	M	78	178	24.8	98	0.93	16	11	6	0.16	0.06	2.7
1997	27	M	80	180	25.0	100	0.94	17	12	7	0.17	0.07	2.5
1998	28	M	82	182	25.2	102	0.95	18	13	8	0.18	0.08	2.3
1999	29	M	85	185	25.4	105	0.96	19	14	9	0.19	0.09	2.1
2000	30	M	88	188	25.6	108	0.97	20	15	10	0.20	0.10	2.0
2001	31	M	90	190	25.8	110	0.98	21	16	11	0.21	0.11	1.9
2002	32	M	92	192	26.0	112	0.99	22	17	12	0.22	0.12	1.8
2003	33	M	95	195	26.2	115	1.00	23	18	13	0.23	0.13	1.7
2004	34	M	98	198	26.4	118	1.01	24	19	14	0.24	0.14	1.7
2005	35	M	100	200	26.5	120	1.02	25	20	15	0.25	0.15	1.7
2006	36	M	102	202	26.6	122	1.03	26	21	16	0.26	0.16	1.6
2007	37	M	105	205	26.8	125	1.04	27	22	17	0.27	0.17	1.6
2008	38	M	108	208	27.0	128	1.05	28	23	18	0.28	0.18	1.6
2009	39	M	110	210	27.1	130	1.06	29	24	19	0.29	0.19	1.5
2010	40	M	112	212	27.2	132	1.07	30	25	20	0.30	0.20	1.5
2011	41	M	115	215	27.4	135	1.08	31	26	21	0.31	0.21	1.5
2012	42	M	118	218	27.6	138	1.09	32	27	22	0.32	0.22	1.4
2013	43	M	120	220	27.7	140	1.10	33	28	23	0.33	0.23	1.4
2014	44	M	122	222	27.8	142	1.11	34	29	24	0.34	0.24	1.4
2015	45	M	125	225	28.0	145	1.12	35	30	25	0.35	0.25	1.4
2016	46	M	128	228	28.2	148	1.13	36	31	26	0.36	0.26	1.4
2017	47	M	130	230	28.3	150	1.14	37	32	27	0.37	0.27	1.4
2018	48	M	132	232	28.4	152	1.15	38	33	28	0.38	0.28	1.4
2019	49	M	135	235	28.6	155	1.16	39	34	29	0.39	0.29	1.4
2020	50	M	138	238	28.8	158	1.17	40	35	30	0.40	0.30	1.3
2021	51	M	140	240	29.0	160	1.18	41	36	31	0.41	0.31	1.3
2022	52	M	142	242	29.1	162	1.19	42	37	32	0.42	0.32	1.3
2023	53	M	145	245	29.3	165	1.20	43	38	33	0.43	0.33	1.3
2024	54	M	148	248	29.5	168	1.21	44	39	34	0.44	0.34	1.3

Ile Tyr Ala Ile Ile Gly Leu Glu Leu Phe Lys Gly Lys Met His Lys
210 215 220

Thr Cys Tyr Phe Ile Gly Thr Asp Ile Val Ala Thr Val Glu Asn Glu
225 230 235 240

5 Glu Pro Ser Pro Cys Ala Arg Thr Gly Ser Gly Arg Arg Cys Thr Ile
245 250 255

Asn Gly Ser Glu Cys Arg Gly Gly Cys Pro Gly Pro Asn His Gly Ile
260 265 270

10 Thr His Phe Asp Asn Phe Gly Phe Ser Met Leu Thr Val Tyr Gln Cys
275 280 285

Ile Thr Met Glu Gly Trp Thr Asp Val Leu Tyr Trp Val Asn Asp Ala
290 295 300

Ile Gly Asn Glu Trp Pro Trp Ile Tyr Phe Val Thr Leu Ile Leu Leu
305 310 315 320

15 Gly Ser Phe Phe Ile Leu Asn Leu Val Leu Gly Val Leu Ser Gly Glu
325 330 335

Phe Thr Lys Glu Arg Glu Lys Ala Lys Ser Arg Gly Thr Phe Gln Lys
340 345 350

20 Leu Arg Glu Lys Gln Gln Leu Asp Glu Asp Leu Arg Gly Tyr Met Ser
355 360 365

Trp Ile Thr Gln Gly Glu Val Met Asp Val Glu Asp Phe Arg Glu Gly
370 375 380

Lys Leu Ser Leu Asp Glu Gly Gly Ser Asp Thr Glu Ser Leu Tyr Glu
385 390 395 400

25 Ile Ala Gly Leu Asn Lys Ile Ile Gln Phe Ile Arg His Trp Arg Gln
405 410 415

Trp Asn Arg Ile Phe Arg Trp Lys Cys His Asp Ile Val Lys Ser Lys
420 425 430

30 Val Phe Tyr Trp Leu Val Ile Leu Ile Val Ala Leu Asn Thr Leu Ser
435 440 445

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30 Ala Gln Lys Ala Lys Ala Glu Glu Lys Lys Arg Arg Lys Met Ser Lys
675 680 685

Gly Leu Pro Asp Lys Ser Glu Glu Glu Lys Ser Thr Met Ala Lys Lys
690 695 700

Leu Glu Gln Lys Pro Lys Gly Glu Gly Ile Pro Thr Thr Ala Lys Leu
705 710 715 720

5 Lys Ile Asp Glu Phe Glu Ser Asn Val Asn Glu Val Lys Asp Pro Tyr
725 730 735

Pro Ser Ala Asp Phe Pro Gly Asp Asp Glu Glu Asp Glu Pro Glu Ile
740 745 750

10 Pro Leu Ser Pro Arg Pro Arg Pro Leu Ala Glu Leu Gln Leu Lys Glu
755 760 765

Lys Ala Val Pro Ile Pro Glu Ala Ser Ser Phe Phe Ile Phe Ser Pro
770 775 780

Thr Asn Lys Ile Arg Val Leu Cys His Arg Ile Val Asn Ala Thr Trp
785 790 795 800

15 Phe Thr Asn Phe Ile Leu Leu Phe Ile Leu Leu Ser Ser Ala Ala Leu
805 810 815

Ala Ala Glu Asp Pro Ile Arg Ala Asp Ser Met Arg Asn Gln Ile Leu
820 825 830

20 Lys His Phe Asp Ile Gly Phe Thr Ser Val Phe Thr Val Glu Ile Val
835 840 845

Leu Lys Met Thr Thr Tyr Gly Ala Phe Leu His Lys Gly Ser Phe Cys
850 855 860

Arg Asn Tyr Phe Asn Met Leu Asp Leu Leu Val Val Ala Val Ser Leu
865 870 875 880

25 Ile Ser Met Gly Leu Glu Ser Ser Ala Ile Ser Val Val Lys Ile Leu
885 890 895

Arg Val Leu Arg Val Leu Arg Pro Leu Arg Ala Ile Asn Arg Ala Lys
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30 Gly Leu Lys His Val Ala Arg Cys Met Phe Val Ala Ile Ser Thr Ile
915 920 925

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Ile Ile Phe Thr Leu Glu Met Ile Leu Lys Leu Met Ala Phe Lys
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Ala Arg Gly Tyr Phe Gly Asn Pro Trp Asn Val Phe Asp Phe Leu
1175 1180 1185

5 Ile Val Ile Gly Ser Ile Ile Asp Val Ile Leu Ser Glu Ile Asp
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Thr Phe Leu Ala Ser Ser Gly Gly Leu Tyr Cys Leu Gly Gly Gly
1205 1210 1215

10 Cys Gly Asn Val Asp Pro Asp Glu Ser Ala Arg Ile Ser Ser Ala
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20 Leu Val Asp Gly Thr Gln Ile Asn Arg Asn Asn Asn Phe Gln Thr
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30 Ala Phe Leu Val Ile Asn Leu Phe Val Ala Val Ile Met Asp Asn
1370 1375 1380

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Leu Asp Glu Phe Lys Ala Ile Trp Ala Glu Tyr Asp Pro Glu Ala
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5 Lys Gly Arg Ile Lys His Leu Asp Val Val Thr Leu Leu Arg Arg
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Ile Gln Pro Pro Leu Gly Phe Gly Lys Phe Cys Pro His Arg Val
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Gly Thr Val Thr Phe Asn Ala Thr Leu Phe Ala Leu Val Arg Thr
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30 Gln Met Glu Pro Glu Glu Val Glu Ile Met Ala Thr Glu Leu Leu
 1820 1825 1830

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	Asn	Phe	Gly	Phe	Ser	Met	Leu	Thr	Val	Tyr	Gln	Cys	Ile	Thr	Met	Glu	
				280				285						290			
35	gga	tgg	act	gac	gtc	ctt	tac	tgg	gtc	aat	gat	gcc	atc	ggg	aat	gag	1149
	Gly	Trp	Thr	Asp	Val	Leu	Tyr	Trp	Val	Asn	Asp	Ala	Ile	Gly	Asn	Glu	
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	Gln	Gln	Leu	Asp	Glu	Asp	Leu	Arg	Gly	Tyr	Met	Ser	Trp	Ile	Thr	Gln	
				360					365					370			
	ggc	gag	gtc	atg	gat	gtt	gag	gac	ttc	aga	gaa	gga	aaa	ctg	tct	ttg	1389
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			375					380					385				
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	Asp	Glu	Gly	Gly	Ser	Asp	Thr	Glu	Ser	Leu	Tyr	Glu	Ile	Ala	Gly	Leu	
			390				395						400				
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	Asn	Lys	Ile	Ile	Gln	Phe	Ile	Arg	His	Trp	Arg	Gln	Trp	Asn	Arg	Ile	
	405				410					415						420	
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15	Phe	Arg	Trp	Lys	Cys	His	Asp	Ile	Val	Lys	Ser	Lys	Val	Phe	Tyr	Trp	
				425					430					435			
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	His	His	Asn	Gln	Pro	His	Trp	Leu	Thr	Arg	Leu	Gln	Asp	Ile	Ala	Asn	
			455				460					465					
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	Arg	Val	Leu	Leu	Ser	Leu	Phe	Thr	Thr	Glu	Met	Leu	Met	Lys	Met	Tyr	
		470				475					480						
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			535				540						545				
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	Phe	Asp	Asn	Phe	Pro	Gln	Ala	Leu	Ile	Ser	Val	Phe	Gln	Val	Leu	Thr	
				600					605					610			
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5	Gly	Glu	Asp	Trp	Thr	Ser	Met	Met	Tyr	Asn	Gly	Ile	Met	Ala	Ser	Ser	
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	Gly	Pro	Ser	Tyr	Pro	Gly	Met	Leu	Val	Cys	Ile	Tyr	Phe	Ile	Ile	Leu	
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	Phe	Val	Cys	Gly	Asn	Tyr	Ile	Leu	Leu	Asn	Val	Phe	Leu	Ala	Ile	Ala	
		645				650					655					660	
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	Lys	Ala	Glu	Glu	Lys	Lys	Arg	Arg	Lys	Met	Ser	Lys	Gly	Leu	Pro	Asp	
				680					685					690			
20	aag	tca	gaa	gag	gag	aag	tca	acg	atg	gcc	aag	aag	ctg	gag	cag	aaa	2349
	Lys	Ser	Glu	Glu	Glu	Lys	Ser	Thr	Met	Ala	Lys	Lys	Leu	Glu	Gln	Lys	
			695					700					705				
	ccc	aag	ggg	gag	ggc	atc	ccc	acc	act	gcc	aag	ctg	aaa	atc	gat	gag	2397
	Pro	Lys	Gly	Glu	Gly	Ile	Pro	Thr	Thr	Ala	Lys	Leu	Lys	Ile	Asp	Glu	
		710					715					720					
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		725				730					735					740	
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			775					780					785				
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	Arg</																

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			855					860					865				
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	Val	Ala	Arg	Cys	Met	Phe	Val	Ala	Ile	Ser	Thr	Ile	Gly	Asn	Ile	Val	
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	Phe	Asp	Asn	Val	Leu	Ser	Ala	Met	Met	Ser	Leu	Phe	Thr	Val	Ser		
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	Tyr	Phe	Gly	Asn	Pro	Trp	Asn	Val	Phe	Asp	Phe	Leu	Ile	Val	Ile	
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	Ala	Ser	Ser	Gly	Gly	Leu	Tyr	Cys	Leu	Gly	Gly	Gly	Cys	Gly	Asn	
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				1330					1335					1340		
10	tcg	gac	tat	gcc	cca	ggg	gag	gag	tac	aca	tgt	ggc	acc	aac	ttt	4293
	Ser	Asp	Tyr	Ala	Pro	Gly	Glu	Glu	Tyr	Thr	Cys	Gly	Thr	Asn	Phe	
				1345					1350					1355		
	gca	tac	tac	tac	ttc	atc	agc	ttc	tac	atg	ctc	tgt	gcc	ttc	ctg	4338
15	Ala	Tyr	Tyr	Tyr	Phe	Ile	Ser	Phe	Tyr	Met	Leu	Cys	Ala	Phe	Leu	
				1360					1365					1370		
	gtc	atc	aac	ctc	ttt	gtg	gct	gtc	atc	atg	gac	aat	ttt	gac	tac	4383
	Val	Ile	Asn	Leu	Phe	Val	Ala	Val	Ile	Met	Asp	Asn	Phe	Asp	Tyr	
				1375					1380					1385		
20	ctc	acc	cgg	gac	tgg	tcc	atc	ctg	ggc	cct	cat	cac	ctg	gat	gag	4428
	Leu	Thr	Arg	Asp	Trp	Ser	Ile	Leu	Gly	Pro	His	His	Leu	Asp	Glu	
				1390					1395					1400		
	ttc	aag	gcc	atc	tgg	gca	gag	tat	gac	cca	gag	gct	aag	ggg	agg	4473
	Phe	Lys	Ala	Ile	Trp	Ala	Glu	Tyr	Asp	Pro	Glu	Ala	Lys	Gly	Arg	
				1405					1410					1415		
25	atc	aaa	cac	ctg	gac	gtg	gtg	acc	ctg	ctg	aga	agg	att	cag	ccc	4518
	Ile	Lys	His	Leu	Asp	Val	Val	Thr	Leu	Leu	Arg	Arg	Ile	Gln	Pro	
				1420					1425					1430		
	cct	ctg	ggc	ttt	ggg	aag	ttc	tgc	cca	cat	cgg	gta	gct	tgt	aag	4563
30	Pro	Leu	Gly	Phe	Gly	Lys	Phe	Cys	Pro	His	Arg	Val	Ala	Cys	Lys	
				1435					1440					1445		
	cgg	ctg	gtg	ggc	atg	aac	atg	ccc	ctg	aac	agc	gac	ggc	aca	gtc	4608
	Arg	Leu	Val	Gly	Met	Asn	Met	Pro	Leu	Asn	Ser	Asp	Gly	Thr	Val	
				1450					1455					1460		
35	acc	ttc	aat	gcc	aca	ctc	ttt	gcc	ctg	gtc	cgc	acg	gca	ctc	aag	4653
	Thr	Phe	Asn	Ala	Thr	Leu	Phe	Ala	Leu	Val	Arg	Thr	Ala	Leu	Lys	
				1465					1470					1475		
	atc	aag	acg	gaa	ggg	aac	ttt	gag	cag	gcc	aac	gag	gag	ctg	agg	4698
	Ile	Lys	Thr	Glu	Gly	Asn	Phe	Glu	Gln	Ala	Asn	Glu	Glu	Leu	Arg	
				1480					1485							

	aag	ttc	tac	gcc	aca	ttc	ctc	atc	cag	gag	cac	ttc	cgg	aag	ttc	4833
	Lys	Phe	Tyr	Ala	Thr	Phe	Leu	Ile	Gln	Glu	His	Phe	Arg	Lys	Phe	
				1525					1530					1535		
5	atg	aaa	cgc	caa	gag	gag	tat	tat	ggc	tat	cgg	ccc	aag	aag	gac	4878
	Met	Lys	Arg	Gln	Glu	Glu	Tyr	Tyr	Gly	Tyr	Arg	Pro	Lys	Lys	Asp	
				1540					1545					1550		
	att	gta	cag	atc	cag	gca	ggg	ctg	cgg	acc	att	gag	gaa	gag	gca	4923
	Ile	Val	Gln	Ile	Gln	Ala	Gly	Leu	Arg	Thr	Ile	Glu	Glu	Glu	Ala	
				1555					1560					1565		
10	gcc	ccc	gag	atc	tgt	cgc	acg	gtc	tca	gga	gac	ctg	gct	gct	gag	4968
	Ala	Pro	Glu	Ile	Cys	Arg	Thr	Val	Ser	Gly	Asp	Leu	Ala	Ala	Glu	
				1570					1575					1580		
15	gag	gag	ctg	gag	aga	gcc	atg	gtg	gag	gct	gcg	atg	gag	gag	ggg	5013
	Glu	Glu	Leu	Glu	Arg	Ala	Met	Val	Glu	Ala	Ala	Met	Glu	Glu	Gly	
				1585					1590					1595		
	ata	ttc	cgg	agg	act	gga	ggc	ctg	ttt	ggc	cag	gtg	gac	aac	ttc	5058
	Ile	Phe	Arg	Arg	Thr	Gly	Gly	Leu	Phe	Gly	Gln	Val	Asp	Asn	Phe	
				1600					1605					1610		
20	ctg	gaa	agg	acc	aac	tcc	ctg	ccc	cct	gtc	atg	gcc	aat	cag	aga	5103
	Leu	Glu	Arg	Thr	Asn	Ser	Leu	Pro	Pro	Val	Met	Ala	Asn	Gln	Arg	
				1615					1620					1625		
	ccc	ctc	cag	ttt	gct	gag	ata	gag	atg	gaa	gag	atg	gag	tca	cct	5148
	Pro	Leu	Gln	Phe	Ala	Glu	Ile	Glu	Met	Glu	Glu	Met	Glu	Ser	Pro	
				1630					1635					1640		
25	gtc	ttc	ttg	gag	gac	ttc	cca	caa	gat	cca	cgc	acc	aac	ccc	ctg	5193
	Val	Phe	Leu	Glu	Asp	Phe	Pro	Gln	Asp	Pro	Arg	Thr	Asn	Pro	Leu	
				1645					1650					1655		
30	gct	cgt	gcc	aat	acc	aac	aat	gcc	aac	gcc	aat	gtc	gcc	tat	gcg	5238
	Ala	Arg	Ala	Asn	Thr	Asn	Asn	Ala	Asn	Ala	Asn	Val	Ala	Tyr	Ala	
				1660					1665					1670		
	aac	agc	aac	cat	agc	aac	agc	cat	gtg	ttt	tcc	agt	gtc	cac	tat	5283
	Asn	Ser	Asn	His	Ser	Asn	Ser	His	Val	Phe	Ser	Ser	Val	His	Tyr	
				1675					1680					1685		
35	gaa	agg	gag	ttc	cca	gaa	gag	aca	gag	acg	cct	gct	acc	aga	gga	5328
	Glu	Arg	Glu	Phe	Pro	Glu	Glu	Thr	Glu	Thr	Pro	Ala	Thr	Arg	Gly	
				1690					1695					1700		
	cga	gcc	ctt	ggc	caa	ccc	tgc	agg	tcc	ctg	gga	ccc	cac	agc	aaa	5373
	Arg	Ala	Leu	Gly	Gln	Pro	Cys	Arg	Ser	Leu	Gly	Pro	His	Ser	Lys	
				1705					1710					1715		</

40 Lys Lys Pro Val Pro Glu Ile Leu Pro Arg Pro Pro Arg Ala Leu Phe
20 25 30

Cys Leu Thr Leu Glu Asn Pro Leu Arg Lys Ala Cys Ile Ser Ile Val
35 40 45

Glu Trp Lys Pro Phe Glu Thr Ile Ile Leu Leu Thr Ile Phe Ala Asn
50 55 60

5 Cys Val Ala Leu Ala Val Tyr Leu Pro Met Pro Glu Asp Asp Asn Asn
65 70 75 80

Ser Leu Asn Leu Gly Leu Glu Lys Leu Glu Tyr Phe Phe Leu Ile Val
85 90 95

10 Phe Ser Ile Glu Ala Ala Met Lys Ile Ile Ala Tyr Gly Phe Leu Phe
100 105 110

His Gln Asp Ala Tyr Leu Arg Ser Gly Trp Asn Val Leu Asp Phe Thr
115 120 125

Ile Val Phe Leu Gly Val Phe Thr Val Ile Leu Glu Gln Val Asn Val
130 135 140

15 Ile Gln Ser His Thr Ala Pro Met Ser Ser Lys Gly Ala Gly Leu Asp
145 150 155 160

Val Lys Ala Leu Arg Ala Phe Arg Val Leu Arg Pro Leu Arg Leu Val
165 170 175

20 Ser Gly Val Pro Ser Leu Gln Val Val Leu Asn Ser Ile Phe Lys Ala
180 185 190

Met Leu Pro Leu Phe His Ile Ala Leu Leu Val Leu Phe Met Val Ile
195 200 205

Ile Tyr Ala Ile Ile Gly Leu Glu Leu Phe Lys Gly Lys Met His Lys
210 215 220

25 Thr Cys Tyr Phe Ile Gly Thr Asp Ile Val Ala Thr Val Glu Asn Glu
225 230 235 240

Glu Pro Ser Pro Cys Ala Arg Thr Gly Ser Gly Arg Arg Cys Thr Ile
245 250 255

30 Asn Gly Ser Glu Cys Arg Gly Gly Cys Pro Gly Pro Asn His Gly Ile
260 265 270

100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430 440 450 460 470 480 490 500 510 520 530 540 550 560 570 580 590 600 610 620 630 640 650 660 670 680 690 700 710 720 730 740 750 760 770 780 790 800 810 820 830 840 850 860 870 880 890 900 910 920 930 940 950 960 970 980 990 1000

30 Asn Arg Phe Asp Cys Phe Val Val Cys Ser Gly Ile Leu Glu Ile Leu
500 505 510

Leu Val Glu Ser Gly Ala Met Thr Pro Leu Gly Ile Ser Val Leu Arg
515 520 525

Cys Ile Arg Leu Leu Arg Ile Phe Lys Ile Thr Lys Tyr Trp Thr Ser
530 535 540

5 Leu Ser Asn Leu Val Ala Ser Leu Leu Asn Ser Ile Arg Ser Ile Ala
545 550 555 560

Ser Leu Leu Leu Leu Leu Phe Leu Phe Ile Val Ile Phe Arg Leu Leu
565 570 575

10 Gly Met Gln Leu Phe Gly Gly Arg Tyr Asp Phe Glu Asp Thr Glu Val
580 585 590

Arg Arg Ser Asn Phe Asp Asn Phe Pro Gln Ala Leu Ile Ser Val Phe
595 600 605

Gln Val Leu Thr Gly Glu Asp Trp Thr Ser Met Met Tyr Asn Gly Ile
610 615 620

15 Met Ala Ser Ser Gly Pro Ser Tyr Pro Gly Met Leu Val Cys Ile Tyr
625 630 635 640

Phe Ile Ile Leu Phe Val Cys Gly Asn Tyr Ile Leu Leu Asn Val Phe
645 650 655

20 Leu Ala Ile Ala Val Asp Asn Leu Ala Glu Ala Glu Ser Leu Thr Ser
660 665 670

Ala Gln Lys Ala Lys Ala Glu Glu Lys Lys Arg Arg Lys Met Ser Lys
675 680 685

Gly Leu Pro Asp Lys Ser Glu Glu Glu Lys Ser Thr Met Ala Lys Lys
690 695 700

25 Leu Glu Gln Lys Pro Lys Gly Glu Gly Ile Pro Thr Thr Ala Lys Leu
705 710 715 720

Lys Ile Asp Glu Phe Glu Ser Asn Val Asn Glu Val Lys Asp Pro Tyr
725 730 735

30 Pro Ser Ala Asp Phe Pro Gly Asp Asp Glu Glu Asp Glu Pro Glu Ile
740 745 750

111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000

Pro Leu Ser Pro Arg Pro Arg Pro Leu Ala Glu Leu Gln Leu Lys Glu
755 760 765

Lys Ala Val Pro Ile Pro Glu Ala Ser Ser Phe Phe Ile Phe Ser Pro
770 775 780

5 Thr Asn Lys Ile Arg Val Leu Cys His Arg Ile Val Asn Ala Thr Trp
785 790 795 800

Phe Thr Asn Phe Ile Leu Leu Phe Ile Leu Leu Ser Ser Ala Ala Leu
805 810 815

10 Ala Ala Glu Asp Pro Ile Arg Ala Asp Ser Met Arg Asn Gln Ile Leu
820 825 830

Lys His Phe Asp Ile Gly Phe Thr Ser Val Phe Thr Val Glu Ile Val
835 840 845

Leu Lys Met Thr Thr Tyr Gly Ala Phe Leu His Lys Gly Ser Phe Cys
850 855 860

15 Arg Asn Tyr Phe Asn Met Leu Asp Leu Leu Val Val Ala Val Ser Leu
865 870 875 880

Ile Ser Met Gly Leu Glu Ser Ser Ala Ile Ser Val Val Lys Ile Leu
885 890 895

20 Arg Val Leu Arg Val Leu Arg Pro Leu Arg Ala Ile Asn Arg Ala Lys
900 905 910

Gly Leu Lys His Val Ala Arg Cys Met Phe Val Ala Ile Ser Thr Ile
915 920 925

Gly Asn Ile Val Leu Val Thr Thr Leu Leu Gln Phe Met Phe Ala Cys
930 935 940

25 Ile Gly Val Gln Leu Phe Lys Gly Lys Phe Phe Arg Cys Thr Asp Leu
945 950 955 960

Ser Lys Met Thr Glu Glu Cys Arg Gly Tyr Tyr Tyr Val Tyr Lys
965 970 975

30 Asp Gly Asp Pro Met Gln Ile Glu Leu Arg His Arg Glu Trp Val His
980 985 990

Ser Asp Phe His Phe Asp Asn Val Leu Ser Ala Met Met Ser Leu Phe
995 1000 1005

Thr Val Ser Thr Phe Glu Gly Trp Pro Gln Leu Leu Tyr Lys Ala
1010 1015 1020

5 Ile Asp Ser Asn Ala Glu Asp Val Gly Pro Ile Tyr Asn Asn Arg
1025 1030 1035

Val Glu Met Ala Ile Phe Phe Ile Ile Tyr Ile Ile Leu Ile Ala
1040 1045 1050

10 Phe Phe Met Met Asn Ile Phe Val Gly Phe Val Ile Val Thr Phe
1055 1060 1065

Gln Glu Gln Gly Glu Thr Glu Tyr Lys Asn Cys Glu Leu Asp Lys
1070 1075 1080

Asn Gln Arg Gln Cys Val Gln Tyr Ala Leu Lys Ala Arg Pro Leu
1085 1090 1095

15 Arg Cys Tyr Ile Pro Lys Asn Pro Tyr Gln Tyr Gln Val Trp Tyr
1100 1105 1110

Ile Val Thr Ser Ser Tyr Phe Glu Tyr Leu Met Phe Ala Leu Ile
1115 1120 1125

20 Met Leu Asn Thr Ile Cys Leu Gly Met Gln His Tyr Asn Gln Ser
1130 1135 1140

Glu Gln Met Asn His Ile Ser Asp Ile Leu Asn Val Ala Phe Thr
1145 1150 1155

Ile Ile Phe Thr Leu Glu Met Ile Leu Lys Leu Met Ala Phe Lys
1160 1165 1170

25 Ala Arg Gly Tyr Phe Gly Asn Pro Trp Asn Val Phe Asp Phe Leu
1175 1180 1185

Ile Val Ile Gly Ser Ile Ile Asp Val Ile Leu Ser Glu Ile Asp
1190 1195 1200

30 Thr Phe Leu Ala Ser Ser Gly Gly Leu Tyr Cys Leu Gly Gly Gly
1205 1210 1215

11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

Cys Gly Asn Val Asp Pro Asp Glu Ser Ala Arg Ile Ser Ser Ala
1220 1225 1230

Phe Phe Arg Leu Phe Arg Val Met Arg Leu Ile Lys Leu Leu Ser
1235 1240 1245

5 Arg Ala Glu Gly Val Arg Thr Leu Leu Trp Thr Phe Ile Lys Ser
1250 1255 1260

Phe Gln Ala Leu Pro Tyr Val Ala Leu Leu Ile Val Met Leu Phe
1265 1270 1275

10 Phe Ile Tyr Ala Val Ile Gly Met Gln Met Phe Gly Lys Ile Ala
1280 1285 1290

Leu Val Asp Gly Thr Gln Ile Asn Arg Asn Asn Asn Phe Gln Thr
1295 1300 1305

Phe Pro Gln Ala Val Leu Leu Leu Phe Arg Cys Ala Thr Gly Glu
1310 1315 1320

15 Ala Trp Gln Glu Ile Leu Leu Ala Cys Ser Tyr Gly Lys Leu Cys
1325 1330 1335

Asp Pro Glu Ser Asp Tyr Ala Pro Gly Glu Glu Tyr Thr Cys Gly
1340 1345 1350

20 Thr Asn Phe Ala Tyr Tyr Tyr Phe Ile Ser Phe Tyr Met Leu Cys
1355 1360 1365

Ala Phe Leu Val Ile Asn Leu Phe Val Ala Val Ile Met Asp Asn
1370 1375 1380

Phe Asp Tyr Leu Thr Arg Asp Trp Ser Ile Leu Gly Pro His His
1385 1390 1395

25 Leu Asp Glu Phe Lys Ala Ile Trp Ala Glu Tyr Asp Pro Glu Ala
1400 1405 1410

Lys Gly Arg Ile Lys His Leu Asp Val Val Thr Leu Leu Arg Arg
1415 1420 1425

30 Ile Gln Pro Pro Leu Gly Phe Gly Lys Phe Cys Pro His Arg Val
1430 1435 1440

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Ala Cys Lys Arg Leu Val Gly Met Asn Met Pro Leu Asn Ser Asp
1445 1450 1455

Gly Thr Val Thr Phe Asn Ala Thr Leu Phe Ala Leu Val Arg Thr
1460 1465 1470

5 Ala Leu Lys Ile Lys Thr Glu Gly Asn Phe Glu Gln Ala Asn Glu
1475 1480 1485

Glu Leu Arg Ala Ile Ile Lys Lys Ile Trp Lys Arg Thr Ser Met
1490 1495 1500

10 Lys Leu Leu Asp Gln Val Ile Pro Pro Ile Gly Asp Asp Glu Val
1505 1510 1515

Thr Val Gly Lys Phe Tyr Ala Thr Phe Leu Ile Gln Glu His Phe
1520 1525 1530

Arg Lys Phe Met Lys Arg Gln Glu Glu Tyr Tyr Gly Tyr Arg Pro
1535 1540 1545

15 Lys Lys Asp Ile Val Gln Ile Gln Ala Gly Leu Arg Thr Ile Glu
1550 1555 1560

Glu Glu Ala Ala Pro Glu Ile Cys Arg Thr Val Ser Gly Asp Leu
1565 1570 1575

20 Ala Ala Glu Glu Glu Leu Glu Arg Ala Met Val Glu Ala Ala Met
1580 1585 1590

Glu Glu Gly Ile Phe Arg Arg Thr Gly Gly Leu Phe Gly Gln Val
1595 1600 1605

Asp Asn Phe Leu Glu Arg Thr Asn Ser Leu Pro Pro Val Met Ala
1610 1615 1620

25 Asn Gln Arg Pro Leu Gln Phe Ala Glu Ile Glu Met Glu Glu Met
1625 1630 1635

Glu Ser Pro Val Phe Leu Glu Asp Phe Pro Gln Asp Pro Arg Thr
1640 1645 1650

30 Asn Pro Leu Ala Arg Ala Asn Thr Asn Asn Ala Asn Ala Asn Val
1655 1660 1665

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His Ser Lys Pro Cys Val Glu Met Leu Lys Gly Leu Leu Thr Gln
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	Leu	Asp	Ser	Ser	Lys	Ala	Gln	Lys	Tyr	Ser	Pro	Ser	His	Ser	Thr	
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Gln Ala Ile Ser Lys Ser Lys Leu Ser Arg Arg Trp Arg Arg Trp Asn
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15 Arg Phe Asn Arg Arg Arg Cys Arg Ala Ala Val Lys Ser Val Thr Phe
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Tyr Trp Leu Val Ile Val Leu Val Phe Leu Asn Thr Leu Thr Ile Ser
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Ser Glu His Tyr Asn Gln Pro Asp Trp Leu Thr Gln Ile Gln Asp Met
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20 Pro Asn Lys Val Leu Leu Ala Leu Phe Thr Cys Glu Met Leu Val Lys
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Met Tyr Ser Leu Gly Leu Gln Ala Tyr Phe Val Ser Leu Phe Asn Arg
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25 Phe Asp Cys Phe Val Val Cys Gly Gly Ile Thr Glu Thr Ile Leu Val
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Glu Leu Glu Ile Met Ser Pro Leu Gly Ile Ser Val Phe Arg Cys Val
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Arg Leu Leu Arg Ile Phe Lys Val Thr Arg His Trp Thr Ser Leu Ser
 180 185 190

30 Asn Leu Val Ala Ser Leu Leu Asn Ser Met Lys Ser Ile Ala Ser Leu
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Leu Leu Leu Leu Phe Leu Phe Ile Ile Ile Phe Ser Leu Leu Gly Met
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5 His Ile Phe Thr Asn Leu Ile Leu Val Phe Ile Met Leu Ser Ser Ala
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Phe Cys Arg Asn Tyr Phe Asn Leu Leu Asp Met Leu Val Val Gly Val
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15 Ser Leu Val Ser Phe Gly Ile Gln Ser Ser Ala Ile Ser Val Val Lys
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Ile Leu Arg Val Leu Arg Val Leu Arg Pro Leu Arg Ala Ile Asn Arg
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20 Ala Lys Gly Leu Lys His Val Val Gln Cys Val Phe Val Ala Ile Arg
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Ala Cys Ile Gly Val Gln Leu Phe Lys Gly Lys Phe Tyr Arg Cys Thr
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5 Val Glu Ile Ser Ile Phe Phe Ile Ile Tyr Ile Ile Ile Val Ala Phe
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15 Pro Phe Glu Tyr Met Met Phe Val Leu Ile Met Leu Asn Thr Leu Cys
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20 Asp Ile Leu Asn Met Val Phe Thr Gly Val Phe Thr Val Glu Met Val
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Ala Thr Pro Gly Asn Ser Glu Glu Ser Asn Arg Ile Ser Ile Thr Phe
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	Ser Gln Arg Lys Arg Gln Gln Tyr Ala Lys Ser Lys Lys Gln Gly Asn	
	85 90 95	
	tcg tcc aac agc cga cct gcc cgc gcc ctt ttc tgt tta tca ctc aat	454
	Ser Ser Asn Ser Arg Pro Ala Arg Ala Leu Phe Cys Leu Ser Leu Asn	
	100 105 110	
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	Asn Pro Ile Arg Arg Ala Cys Ile Ser Ile Val Glu Trp Lys Pro Phe	
	115 120 125	
	gac ata ttt ata tta ttg gct att ttt gcc aat tgt gtg gcc tta gct	550
	Asp Ile Phe Ile Leu Leu Ala Ile Phe Ala Asn Cys Val Ala Leu Ala	
	130 135 140	
25	att tac atc cca ttc cct gaa gat gat tct aat tca aca aat cat aac	598
	Ile Tyr Ile Pro Phe Pro Glu Asp Asp Ser Asn Ser Thr Asn His Asn	
	145 150 155 160	
30	ttg gaa aaa gta gaa tat gcc ttc ctg att att ttt aca gtc gag aca	646
	Leu Glu Lys Val Glu Tyr Ala Phe Leu Ile Ile Phe Thr Val Glu Thr	
	165 170 175	
	ttt ttg aag att ata gcg tat gga tta ttg cta cat cct aat gct tat	694
	Phe Leu Lys Ile Ile Ala Tyr Gly Leu Leu Leu His Pro Asn Ala Tyr	
	180 185 190	
35	gtt agg aat gga tgg aat tta ctg gat ttt gtt ata gta ata gta gga	742
	Val Arg Asn Gly Trp Asn Leu Leu Asp Phe Val Ile Val Ile Val Gly	
	195 200 205	
	ttg ttt agt gta att ttg gaa caa tta acc aaa gaa aca gaa ggc ggg	790
	Leu Phe Ser Val Ile Leu Glu Gln Leu Thr Lys Glu Thr Glu Gly Gly	
	210 215 220	
40	aac cac tca agc ggc aaa tct gga ggc ttt gat gtc aaa gcc ctc cgt	838
	Asn His Ser Ser Gly Lys Ser Gly Gly Phe Asp Val Lys Ala Leu Arg	
	225 230 235 240	
45	gcc ttt cga gtg ttg cga cca ctt cga cta gtg tca ggg gtg ccc agt	886
	Ala Phe Arg Val Leu Arg Pro Leu Arg Leu Val Ser Gly Val Pro Ser	
	245 250 255	

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	Leu	Gln	Val	Val	Leu	Asn	Ser	Ile	Ile	Lys	Ala	Met	Val	Pro	Leu	Leu	
				260					265					270			
5	cac	ata	gcc	ctt	ttg	gta	tta	ttt	gta	atc	ata	atc	tat	gct	att	ata	982
	His	Ile	Ala	Leu	Leu	Val	Leu	Phe	Val	Ile	Ile	Ile	Tyr	Ala	Ile	Ile	
			275					280					285				
	gga	ttg	gaa	ctt	ttt	att	gga	aaa	atg	cac	aaa	aca	tgt	ttt	ttt	gct	1030
	Gly	Leu	Glu	Leu	Phe	Ile	Gly	Lys	Met	His	Lys	Thr	Cys	Phe	Phe	Ala	
		290					295					300					
10	gac	tca	gat	atc	gta	gct	gaa	gag	gac	cca	gct	cca	tgt	gcg	ttc	tca	1078
	Asp	Ser	Asp	Ile	Val	Ala	Glu	Glu	Asp	Pro	Ala	Pro	Cys	Ala	Phe	Ser	
	305					310					315					320	
	ggg	aat	gga	cgc	cag	tgt	act	gcc	aat	ggc	acg	gaa	tgt	agg	agt	ggc	1126
15	Gly	Asn	Gly	Arg	Gln	Cys	Thr	Ala	Asn	Gly	Thr	Glu	Cys	Arg	Ser	Gly	
				325					330					335			
	tgg	gtt	ggc	ccg	aac	gga	ggc	atc	acc	aac	ttt	gat	aac	ttt	gcc	ttt	1174
	Trp	Val	Gly	Pro	Asn	Gly	Gly	Ile	Thr	Asn	Phe	Asp	Asn	Phe	Ala	Phe	
				340				345						350			
20	gcc	atg	ctt	act	gtg	ttt	cag	tgc	atc	acc	atg	gag	ggc	tgg	aca	gac	1222
	Ala	Met	Leu	Thr	Val	Phe	Gln	Cys	Ile	Thr	Met	Glu	Gly	Trp	Thr	Asp	
			355					360					365				
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	Val	Leu	Tyr	Trp	Val	Asn	Asp	Ala	Ile	Gly	Trp	Glu	Trp	Pro	Trp	Val	
		370					375					380					
25	tat	ttt	gtt	agt	ctg	atc	atc	ctt	ggc	tca	ttt	ttc	gtc	ctt	aac	ctg	1318
	Tyr	Phe	Val	Ser	Leu	Ile	Ile	Leu	Gly	Ser	Phe	Phe	Val	Leu	Asn	Leu	
	385					390					395					400	
	gtt	ctt	ggt	gtc	ctt	agt	gga	gaa	ttc	tca	aag	gaa	aga	gag	aag	gca	1366
30	Val	Leu	Gly	Val	Leu	Ser	Gly	Glu	Phe	Ser	Lys	Glu	Arg	Glu	Lys	Ala	
				405					410					415			
	aaa	gca	cgg	gga	gat	ttc	cag	aag	ctc	cgg	gag	aag	cag	cag	ctg	gag	1414
	Lys	Ala	Arg	Gly	Asp	Phe	Gln	Lys	Leu	Arg	Glu	Lys	Gln	Gln	Leu	Glu	
			420					425					430				
35	gag	gat	cta	aag	ggc	tac	ttg	gat	tgg	atc	acc	caa	gct	gag	gac	atc	1462
	Glu	Asp	Leu	Lys	Gly	Tyr	Leu	Asp	Trp	Ile	Thr	Gln	Ala	Glu	Asp	Ile	
			435					440					445				
	gat	ccg	gag	aat	gag	gaa	gaa	gga	gga	gag	gaa	ggc	aaa	cga	aat	act	1510
	Asp	Pro	Glu	Asn	Glu	Glu	Glu	Gly	Gly	Glu	Glu						

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	gct tac ggg ggc cca tcc tct tca gga atg atc gtc tgc atc tac ttc	2374
	Ala Tyr Gly Gly Pro Ser Ser Ser Gly Met Ile Val Cys Ile Tyr Phe	
	740 745 750	
5	atc atc ctc ttc att tgt ggt aac tat att cta ctg aat gtc ttc ttg	2422
	Ile Ile Leu Phe Ile Cys Gly Asn Tyr Ile Leu Leu Asn Val Phe Leu	
	755 760 765	
	gcc atc gct gta gac aat ttg gct gat gct gaa agt ctg aac act gct	2470
	Ala Ile Ala Val Asp Asn Leu Ala Asp Ala Glu Ser Leu Asn Thr Ala	
	770 775 780	
10	cag aaa gaa gaa gcg gaa gaa aag gag agg aaa aag att gcc aga aaa	2518
	Gln Lys Glu Glu Ala Glu Glu Lys Glu Arg Lys Lys Ile Ala Arg Lys	
	785 790 795 800	
	gag agc cta gaa aat aaa aag aac aac aaa cca gaa gtc aac cag ata	2566
15	Glu Ser Leu Glu Asn Lys Lys Asn Asn Lys Pro Glu Val Asn Gln Ile	
	805 810 815	
	gcc aac agt gac aac aag gtt aca att gat gac tat aga gaa gag gat	2614
	Ala Asn Ser Asp Asn Lys Val Thr Ile Asp Asp Tyr Arg Glu Glu Asp	
	820 825 830	
20	gaa gac aag gac ccc tat ccg cct tgc gat gtg cca gta ggg gaa gag	2662
	Glu Asp Lys Asp Pro Tyr Pro Pro Cys Asp Val Pro Val Gly Glu Glu	
	835 840 845	
	gaa gag gaa gag gag gag gat gaa cct gag gtt cct gcc gga ccc cgt	2710
	Glu Glu Glu Glu Glu Glu Asp Glu Pro Glu Val Pro Ala Gly Pro Arg	
	850 855 860	
25	cct cga agg atc tcg gag ttg aac atg aag gaa aaa att gcc ccc atc	2758
	Pro Arg Arg Ile Ser Glu Leu Asn Met Lys Glu Lys Ile Ala Pro Ile	
	865 870 875 880	
	cct gaa ggg agc gct ttc ttc att ctt agc aag acc aac ccg atc cgc	2806
30	Pro Glu Gly Ser Ala Phe Phe Ile Leu Ser Lys Thr Asn Pro Ile Arg	
	885 890 895	
	gta ggc tgc cac aag ctc atc aac cac cac atc ttc acc aac ctc atc	2854
	Val Gly Cys His Lys Leu Ile Asn His His Ile Phe Thr Asn Leu Ile	
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35	ctt gtc ttc atc atg ctg agc agc gct gcc ctg gcc gca gag gac ccc	2902
	Leu Val Phe Ile Met Leu Ser Ser Ala Ala Leu Ala Ala Glu Asp Pro	
	915 920 925	
	atc cgc agc cac tcc ttc cgg aac acg ata ctg ggt tac ttt gac tat	2950
	Ile Arg Ser His Ser Phe Arg Asn Thr Ile Leu Gly Tyr Phe Asp Tyr	
	930 935 940	
40	gcc ttc aca gcc atc ttt act gtt gag atc ctg ttg aag atg aca act	2998
	Ala Phe Thr Ala Ile Phe Thr Val Glu Ile Leu Leu Lys Met Thr Thr	
	945 950 955 960	
45	ttt gga gct ttc ctc cac aaa ggg gcc ttc tgc agg aac tac ttc aat	3046
	Phe Gly Ala Phe Leu His Lys Gly Ala Phe Cys Arg Asn Tyr Phe Asn	
	965 970 975	

	ttg	ctg	gat	atg	ctg	gtg	ggt	ggg	gtg	tct	ctg	gtg	tca	ttt	ggg	att	3094
	Leu	Leu	Asp	Met	Leu	Val	Val	Gly	Val	Ser	Leu	Val	Ser	Phe	Gly	Ile	
				980					985					990			
5	caa	tcc	agt	gcc	atc	tcc	ggt	gtg	aag	att	ctg	agg	gtc	tta	agg	gtc	3142
	Gln	Ser	Ser	Ala	Ile	Ser	Val	Val	Lys	Ile	Leu	Arg	Val	Leu	Arg	Val	
				995				1000					1005				
	ctg	cgt	ccc	ctc	agg	gcc	atc	aac	aga	gca	aaa	gga	ctt	aag	cac		3187
	Leu	Arg	Pro	Leu	Arg	Ala	Ile	Asn	Arg	Ala	Lys	Gly	Leu	Lys	His		
			1010				1015					1020					
10	gtg	gtc	cag	tgc	gtc	ttc	gtg	gcc	atc	cgg	acc	atc	ggc	aac	atc		3232
	Val	Val	Gln	Cys	Val	Phe	Val	Ala	Ile	Arg	Thr	Ile	Gly	Asn	Ile		
			1025				1030					1035					
	atg	atc	gtc	act	acc	ctc	ctg	cag	ttc	atg	ttt	gcc	tgt	atc	ggg		3277
15	Met	Ile	Val	Thr	Thr	Leu	Leu	Gln	Phe	Met	Phe	Ala	Cys	Ile	Gly		
		1040					1045					1050					
	gtc	cag	ttg	ttc	aag	ggg	aag	ttc	tat	cgc	tgt	acg	gat	gaa	gcc		3322
	Val	Gln	Leu	Phe	Lys	Gly	Lys	Phe	Tyr	Arg	Cys	Thr	Asp	Glu	Ala		
			1055				1060					1065					
20	aaa	agt	aac	cct	gaa	gaa	tgc	agg	gga	ctt	ttc	atc	ctc	tac	aag		3367
	Lys	Ser	Asn	Pro	Glu	Glu	Cys	Arg	Gly	Leu	Phe	Ile	Leu	Tyr	Lys		
		1070					1075					1080					
	gat	ggg	gat	gtt	gac	agt	cct	gtg	gtc	cgt	gaa	cgg	atc	tgg	caa		3412
	Asp	Gly	Asp	Val	Asp	Ser	Pro	Val	Val	Arg	Glu	Arg	Ile	Trp	Gln		
			1085				1090					1095					
25	aac	agt	gat	ttc	aac	ttc	gac	aac	gtc	ctc	tct	gct	atg	atg	gcg		3457
	Asn	Ser	Asp	Phe	Asn	Phe	Asp	Asn	Val	Leu	Ser	Ala	Met	Met	Ala		
		1100					1105					1110					
	ctc	ttc	aca	gtc	tcc	acg	ttt	gag	ggc	tgg	cct	gcg	ttg	ctg	tat		3502
30	Leu	Phe	Thr	Val	Ser	Thr	Phe	Glu	Gly	Trp	Pro	Ala	Leu	Leu	Tyr		
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	Lys	Ala	Ile	Asp	Ser	Asn	Gly	Glu	Asn	Ile	Gly	Pro	Ile	Tyr	Asn		
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35	cac	cgc	gtg	gag	atc	tcc	atc	ttc	ttc	atc	atc	tac	atc	atc	att		3592
	His	Arg	Val	Glu	Ile	Ser	Ile	Phe	Phe	Ile	Ile	Tyr	Ile	Ile	Ile		
		1145					1150					1155					
	gta	gct	ttc	ttc	atg	atg	aac	atc	ttt	gtg	ggc	ttt	gtc	atc	gtt		3637
	Val	Ala	Phe	Phe	Met	Met	Asn	Ile	Phe	Val	Gly	Phe	Val	Ile	Val		

	ccc ttg	cgg aga	tac atc	ccc	aaa aac	ccc tac	cag	tac aag	ttc	3772
	Pro Leu	Arg Arg	Tyr Ile	Pro	Lys Asn	Pro Tyr	Gln	Tyr Lys	Phe	
	1205			1210			1215			
5	tgg tac	gtg gtg	aac tct	tcg	cct ttc	gaa tac	atg	atg ttt	gtc	3817
	Trp Tyr	Val Val	Asn Ser	Ser	Pro Phe	Glu Tyr	Met	Met Phe	Val	
	1220			1225			1230			
	ctc atc	atg ctc	aac aca	ctc	tgc ttg	gcc atg	cag	cac tac	gag	3862
	Leu Ile	Met Leu	Asn Thr	Leu	Cys Leu	Ala Met	Gln	His Tyr	Glu	
	1235			1240			1245			
10	cag tcc	aag atg	ttc aat	gat	gcc atg	gac att	ctg	aac atg	gtc	3907
	Gln Ser	Lys Met	Phe Asn	Asp	Ala Met	Asp Ile	Leu	Asn Met	Val	
	1250			1255			1260			
	ttc acc	ggg gtg	ttc acc	gtc	gag atg	gtt ttg	aaa	gtc atc	gca	3952
15	Phe Thr	Gly Val	Phe Thr	Val	Glu Met	Val Leu	Lys	Val Ile	Ala	
	1265			1270			1275			
	ttt aag	cct aag	ggg tat	ttt	agt gac	gcc tgg	aac	acg ttt	gac	3997
	Phe Lys	Pro Lys	Gly Tyr	Phe	Ser Asp	Ala Trp	Asn	Thr Phe	Asp	
	1280			1285			1290			
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	Ser Leu	Ile Val	Ile Gly	Ser	Ile Ile	Asp Val	Ala	Leu Ser	Glu	
	1295			1300			1305			
	gcg gac	cca act	gaa agt	gaa	aat gtc	cct gtc	cca	act gct	aca	4087
	Ala Asp	Pro Thr	Glu Ser	Glu	Asn Val	Pro Val	Pro	Thr Ala	Thr	
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25	cct ggg	aac tct	gaa gag	agc	aat aga	atc tcc	atc	acc ttt	ttc	4132
	Pro Gly	Asn Ser	Glu Glu	Ser	Asn Arg	Ile Ser	Ile	Thr Phe	Phe	
	1325			1330			1335			
	cgt ctt	ttc cga	gtg atg	cga	ttg gtg	aag ctt	ctc	agc agg	ggg	4177
30	Arg Leu	Phe Arg	Val Met	Arg	Leu Val	Lys Leu	Leu	Ser Arg	Gly	
	1340			1345			1350			
	gaa ggc	atc cgg	aca ttg	ctg	tgg act	ttt att	aag	tcc ttt	cag	4222
	Glu Gly	Ile Arg	Thr Leu	Leu	Trp Thr	Phe Ile	Lys	Ser Phe	Gln	
	1355			1360			1365			
35	gcg ctc	ccg tat	gtg gcc	ctc	ctc ata	gcc atg	ctg	ttc ttc	atc	4267
	Ala Leu	Pro Tyr	Val Ala	Leu	Leu Ile	Ala Met	Leu	Phe Phe	Ile	
	1370			1375			1380			
	tat gcg	gtc att	ggc atg	cag	atg ttt	ggg aaa	gtt	gcc atg	aga	4312
	Tyr Ala	Val Ile	Gly Met	Gln	Met Phe	Gly Lys	Val	Ala Met	Arg	
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	Asp Asn	Asn Gln	Ile Asn	Arg	Asn Asn	Asn Phe	Gln	Thr Phe	Pro	
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45	cag gcg	gtg ctg	ctg ctc	ttc	agg tgt	gca aca	ggt	gag gcc	tgg	4402
	Gln Ala	Val Leu	Leu Leu	Phe	Arg Cys	Ala Thr	Gly	Glu Ala	Trp	
	1415			1420			1425			

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	Gln	Glu	Ile	Met	Leu	Ala	Cys	Leu	Pro	Gly	Lys	Leu	Cys	Asp	Pro		
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	Glu	Ser	Asp	Tyr	Asn	Pro	Gly	Glu	Glu	Tyr	Thr	Cys	Gly	Ser	Asn		
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	Phe	Ala	Ile	Val	Tyr	Phe	Ile	Ser	Phe	Tyr	Met	Leu	Cys	Ala	Phe		
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	Leu	Ile	Ile	Asn	Leu	Phe	Val	Ala	Val	Ile	Met	Asp	Asn	Phe	Asp		
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15	Tyr	Leu	Thr	Arg	Asp	Trp	Ser	Ile	Leu	Gly	Pro	His	His	Leu	Asp		
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	Glu	Phe	Lys	Arg	Ile	Trp	Ser	Glu	Tyr	Asp	Pro	Glu	Ala	Lys	Gly		
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	Arg	Ile	Lys	His	Leu	Asp	Val	Val	Thr	Leu	Leu	Arg	Arg	Ile	Gln		
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	Pro	Pro	Leu	Gly	Phe	Gly	Lys	Leu	Cys	Pro	His	Arg	Val	Ala	Cys		
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	Lys	Arg	Leu	Val	Ala	Met	Asn	Met	Pro	Leu	Asn	Ser	Asp	Gly	Thr		
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30	Val	Met	Phe	Asn	Ala	Thr	Leu	Phe	Ala	Leu	Val	Arg	Thr	Ala	Leu		
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	aag	atc	aag	acc	gaa	ggg	aac	ctg	gag	caa	gct	aat	gaa	gaa	ctt		4897
	Lys	Ile	Lys	Thr	Glu	Gly	Asn	Leu	Glu	Gln	Ala	Asn	Glu	Glu	Leu		
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35	cgg	gct	gtg	ata	aag	aaa	att	tgg	aag	aaa	acc	agc	atg	aaa	tta		4942
	Arg	Ala	Val	Ile	Lys	Lys	Ile	Trp	Lys	Lys	Thr	Ser	Met	Lys	Leu		
		1595					1600					1605					
	ctt	gac	caa	ggt	gtc	cct	cca	gct	ggt	gat	gat	gag	gta	acc	gtg		4987
	Leu	Asp	Gln	Val	Val	Pro	Pro	Ala	Gly	Asp	Asp	Glu	Val	Thr	Val		

	aag aac acc aca att gcc cta cag gcg gga tta agg aca ctg cat	5122
	Lys Asn Thr Thr Ile Ala Leu Gln Ala Gly Leu Arg Thr Leu His	
	1655 1660 1665	
5	gac att ggg cca gaa atc cgg cgt gct ata tcg tgt gat ttg caa	5167
Asp	Ile Gly Pro Glu Ile Arg Arg Ala Ile Ser Cys Asp Leu Gln	
	1670 1675 1680	
	gat gac gag cct gag gaa aca aaa cga gaa gaa gaa gat gat gtg	5212
Asp	Asp Glu Pro Glu Glu Thr Lys Arg Glu Glu Glu Asp Asp Val	
	1685 1690 1695	
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Phe	Lys Arg Asn Gly Ala Leu Leu Gly Asn His Val Asn His Val	
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	aat agt gat agg aga gat tcc ctt cag cag acc aat acc acc cac	5302
15	Asn Ser Asp Arg Arg Asp Ser Leu Gln Gln Thr Asn Thr Thr His	
	1715 1720 1725	
	cgt ccc ctg cat gtc caa agg cct tca att cca cct gca agt gat	5347
Arg	Pro Leu His Val Gln Arg Pro Ser Ile Pro Pro Ala Ser Asp	
	1730 1735 1740	
20	act gag aaa ccg ctg ttt cct cca gca gga aat tcg gtg tgt cat	5392
Thr	Glu Lys Pro Leu Phe Pro Pro Ala Gly Asn Ser Val Cys His	
	1745 1750 1755	
	aac cat cat aac cat aat tcc ata gga aag caa gtt ccc acc tca	5437
Asn	His His Asn His Asn Ser Ile Gly Lys Gln Val Pro Thr Ser	
	1760 1765 1770	
25	aca aat gcc aat ctc aat aat gcc aat atg tcc aaa gct gcc cat	5482
Thr	Asn Ala Asn Leu Asn Asn Ala Asn Met Ser Lys Ala Ala His	
	1775 1780 1785	
	gga aag cgg ccc agc att ggg aac ctt gag cat gtg tct gaa aat	5527
30	Gly Lys Arg Pro Ser Ile Gly Asn Leu Glu His Val Ser Glu Asn	
	1790 1795 1800	
	ggg cat cat tct tcc cac aag cat gac cgg gag cct cag aga agg	5572
Gly	His His Ser Ser His Lys His Asp Arg Glu Pro Gln Arg Arg	
	1805 1810 1815	
35	tcc agt gtg aaa aga acc cgc tat tat gaa act tac att agg tcc	5617
Ser	Ser Val Lys Arg Thr Arg Tyr Tyr Glu Thr Tyr Ile Arg Ser	
	1820 1825 1830	
	gac tca gga gat gaa cag ctc cca act att tgc cgg gaa gac cca	5662
Asp	Ser Gly Asp Glu Gln Leu Pro Thr Ile Cys Arg Glu Asp Pro	
	1835 1840 1845	
40	gag ata cat ggc tat ttc agg gac ccc cac tgc ttg ggg gag cag	5707
Glu	Ile His Gly Tyr Phe Arg Asp Pro His Cys Leu Gly Glu Gln	
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	Arg	Arg	Ser	Ser	Phe	Asn	Phe	Glu	Cys	Leu	Arg	Arg	Gln	Ser	Ser	
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	Leu	Pro	Leu	His	Leu	Met	Gln	Gln	Gln	Ile	Met	Ala	Val	Ala	Gly	
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	Leu	Asp	Ser	Ser	Lys	Ala	Gln	Lys	Tyr	Ser	Pro	Ser	His	Ser	Thr	
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	Arg	Ser	Trp	Ala	Thr	Pro	Pro	Ala	Thr	Pro	Pro	Tyr	Arg	Asp	Trp	
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-212-

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Pro Leu Ser Gly Glu Gly Pro Thr Ser Gln Pro Asn Ser Ser Lys Gln
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Thr Val Leu Ser Trp Gln Ala Ala Ile Asp Ala Ala Arg Gln Ala Lys
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Ala Ala Gln Thr Met Ser Thr Ser Ala Pro Pro Pro Val Gly Ser Leu
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5 Ser Gln Arg Lys Arg Gln Gln Tyr Ala Lys Ser Lys Lys Gln Gly Asn
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Ser Ser Asn Ser Arg Pro Ala Arg Ala Leu Phe Cys Leu Ser Leu Asn
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10 Asn Pro Ile Arg Arg Ala Cys Ile Ser Ile Val Glu Trp Lys Pro Phe
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Asp Ile Phe Ile Leu Leu Ala Ile Phe Ala Asn Cys Val Ala Leu Ala
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Ile Tyr Ile Pro Phe Pro Glu Asp Asp Ser Asn Ser Thr Asn His Asn
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15 Leu Glu Lys Val Glu Tyr Ala Phe Leu Ile Ile Phe Thr Val Glu Thr
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Phe Leu Lys Ile Ile Ala Tyr Gly Leu Leu Leu His Pro Asn Ala Tyr
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20 Val Arg Asn Gly Trp Asn Leu Leu Asp Phe Val Ile Val Ile Val Gly
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Leu Phe Ser Val Ile Leu Glu Gln Leu Thr Lys Glu Thr Glu Gly Gly
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Asn His Ser Ser Gly Lys Ser Gly Gly Phe Asp Val Lys Ala Leu Arg
225 230 235 240

25 Ala Phe Arg Val Leu Arg Pro Leu Arg Leu Val Ser Gly Val Pro Ser
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Leu Gln Val Val Leu Asn Ser Ile Ile Lys Ala Met Val Pro Leu Leu
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30 His Ile Ala Leu Leu Val Leu Phe Val Ile Ile Ile Tyr Ala Ile Ile
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30 Gly Gln Ala Ile Ser Lys Ser Lys Leu Ser Arg Arg Trp Arg Arg Trp
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Asn Arg Phe Asn Arg Arg Arg Cys Arg Ala Ala Val Lys Ser Val Thr
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Phe Tyr Trp Leu Val Ile Val Leu Val Phe Leu Asn Thr Leu Thr Ile
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5 Ser Ser Glu His Tyr Asn Gln Pro Asp Trp Leu Thr Gln Ile Gln Asp
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Ile Ala Asn Lys Val Leu Leu Ala Leu Phe Thr Cys Glu Met Leu Val
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10 Lys Met Tyr Ser Leu Gly Leu Gln Ala Tyr Phe Val Ser Leu Phe Asn
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Arg Phe Asp Cys Phe Val Val Cys Gly Gly Ile Thr Glu Thr Ile Leu
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Val Glu Leu Glu Ile Met Ser Pro Leu Gly Ile Ser Val Phe Arg Cys
625 630 635 640

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Ser Asn Leu Val Ala Ser Leu Leu Asn Ser Met Lys Ser Ile Ala Ser
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20 Leu Leu Leu Leu Leu Phe Leu Phe Ile Ile Ile Phe Ser Leu Leu Gly
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Gln Lys Glu Glu Ala Glu Glu Lys Glu Arg Lys Lys Ile Ala Arg Lys
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Leu Leu Asp Met Leu Val Val Gly Val Ser Leu Val Ser Phe Gly Ile
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Pro Leu Arg Arg Tyr Ile Pro Lys Asn Pro Tyr Gln Tyr Lys Phe
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			355					360					365				
5	gtg	ctc	tac	tgg	gta	aat	gat	gcg	ata	gga	tgg	gaa	tgg	cca	tgg	gtg	1270
	Val	Leu	Tyr	Trp	Val	Asn	Asp	Ala	Ile	Gly	Trp	Glu	Trp	Pro	Trp	Val	
			370				375					380					
	tat	ttt	gtt	agt	ctg	atc	atc	ctt	ggc	tca	ttt	ttc	gtc	ctt	aac	ctg	1318
	Tyr	Phe	Val	Ser	Leu	Ile	Ile	Leu	Gly	Ser	Phe	Phe	Val	Leu	Asn	Leu	
						390					395					400	
10	gtt	ctt	ggg	gtc	ctt	agt	gga	gaa	ttc	tca	aag	gaa	aga	gag	aag	gca	1366
	Val	Leu	Gly	Val	Leu	Ser	Gly	Glu	Phe	Ser	Lys	Glu	Arg	Glu	Lys	Ala	
					405					410					415		
15	aaa	gca	cgg	gga	gat	ttc	cag	aag	ctc	cgg	gag	aag	cag	cag	ctg	gag	1414
	Lys	Ala	Arg	Gly	Asp	Phe	Gln	Lys	Leu	Arg	Glu	Lys	Gln	Gln	Leu	Glu	
				420					425					430			
	gag	gat	cta	aag	ggc	tac	ttg	gat	tgg	atc	acc	caa	gct	gag	gac	atc	1462
	Glu	Asp	Leu	Lys	Gly	Tyr	Leu	Asp	Trp	Ile	Thr	Gln	Ala	Glu	Asp	Ile	
				435				440					445				
20	gat	ccg	gag	aat	gag	gaa	gaa	gga	gga	gag	gaa	ggc	aaa	cga	aat	act	1510
	Asp	Pro	Glu	Asn	Glu	Glu	Glu	Gly	Gly	Glu	Glu	Gly	Lys	Arg	Asn	Thr	
							455					460					
	agc	atg	ccc	acc	agc	gag	act	gag	tct	gtg	aac	aca	gag	aac	gtc	agc	1558
	Ser	Met	Pro	Thr	Ser	Glu	Thr	Glu	Ser	Val	Asn	Thr	Glu	Asn	Val	Ser	
						470					475					480	
25	ggt	gaa	ggc	gag	aac	cga	ggc	tgc	tgt	gga	agt	ctc	tgg	tgc	tgg	tgg	1606
	Gly	Glu	Gly	Glu	Asn	Arg	Gly	Cys	Cys	Gly	Ser	Leu	Trp	Cys	Trp	Trp	
					485					490					495		
30	aga	cgg	aga	ggc	gcg	gcc	aag	gcg	ggg	ccc	tct	ggg	tgt	cgg	cgg	tgg	1654
	Arg	Arg	Arg	Gly	Ala	Ala	Lys	Ala	Gly	Pro	Ser	Gly	Cys	Arg	Arg	Trp	
				500					505					510			
	ggt	caa	gcc	atc	tca	aaa	tcc	aaa	ctc	agc	cga	cgc	tgg	cgt	cgc	tgg	1702
	Gly	Gln	Ala	Ile	Ser	Lys	Ser	Lys	Leu	Ser	Arg	Arg	Trp	Arg	Arg	Trp	
				515				520					525				
35	aac	cga	ttc	aat	cgc	aga	aga	tgt	agg	gcc	gcc	gtg	aag	tct	gtc	acg	1750
	Asn	Arg	Phe	Asn	Arg	Arg	Arg	Cys	Arg	Ala	Ala	Val	Lys	Ser	Val	Thr	
				530				535				540					
	ttt	tac	tgg	ctg	gtt	atc	gtc	ctg	gtg	ttt	ctg	aac	acc	tta	acc	att	1798
	Phe	Tyr	Trp	Leu	Val	Ile	Val	Leu	Val	Phe	Leu	Asn	Thr	Leu	Thr		

	aaa atg tac agc ttg ggc ctc caa gca tat ttc gtc tct ctt ttc aac	1942
	Lys Met Tyr Ser Leu Gly Leu Gln Ala Tyr Phe Val Ser Leu Phe Asn	
	595 600 605	
5	cgg ttt gat tgc ttc gtg gtg tgt ggt gga atc act gag acg atc ctg	1990
	Arg Phe Asp Cys Phe Val Val Cys Gly Gly Ile Thr Glu Thr Ile Leu	
	610 615 620	
	gtg gaa ctg gaa atc atg tct ccc ctg ggg atc tct gtg ttt cgg tgt	2038
	Val Glu Leu Glu Ile Met Ser Pro Leu Gly Ile Ser Val Phe Arg Cys	
	625 630 635 640	
10	gtg cgc ctc tta aga atc ttc aaa gtg acc agg cac tgg act tcc ctg	2086
	Val Arg Leu Leu Arg Ile Phe Lys Val Thr Arg His Trp Thr Ser Leu	
	645 650 655	
	agc aac tta gtg gca tcc tta tta aac tcc atg aag tcc atc gct tcg	2134
15	Ser Asn Leu Val Ala Ser Leu Leu Asn Ser Met Lys Ser Ile Ala Ser	
	660 665 670	
	ctg ttg ctt ctg ctt ttt ctc ttc att atc atc ttt tcc ttg ctt ggg	2182
	Leu Leu Leu Leu Leu Phe Leu Phe Ile Ile Ile Phe Ser Leu Leu Gly	
	675 680 685	
20	atg cag ctg ttt ggc ggc aag ttt aat ttt gat gaa acg caa acc aag	2230
	Met Gln Leu Phe Gly Gly Lys Phe Asn Phe Asp Glu Thr Gln Thr Lys	
	690 695 700	
	cgg agc acc ttt gac aat ttc cct caa gca ctt ctc aca gtg ttc cag	2278
	Arg Ser Thr Phe Asp Asn Phe Pro Gln Ala Leu Leu Thr Val Phe Gln	
	705 710 715 720	
25	atc ctg aca ggc gaa gac tgg aat gct gtg atg tac gat ggc atc atg	2326
	Ile Leu Thr Gly Glu Asp Trp Asn Ala Val Met Tyr Asp Gly Ile Met	
	725 730 735	
	gct tac ggg ggc cca tcc tct tca gga atg atc gtc tgc atc tac ttc	2374
30	Ala Tyr Gly Gly Pro Ser Ser Ser Gly Met Ile Val Cys Ile Tyr Phe	
	740 745 750	
	atc atc ctc ttc att tgt ggt aac tat att cta ctg aat gtc ttc ttg	2422
	Ile Ile Leu Phe Ile Cys Gly Asn Tyr Ile Leu Leu Asn Val Phe Leu	
	755 760 765	
35	gcc atc gct gta gac aat ttg gct gat gct gaa agt ctg aac act gct	2470
	Ala Ile Ala Val Asp Asn Leu Ala Asp Ala Glu Ser Leu Asn Thr Ala	
	770 775 780	
	cag aaa gaa gaa gcg gaa gaa aag gag agg aaa aag att gcc aga aaa	2518
	Gln Lys Glu Glu Ala Glu Glu Lys Glu Arg Lys Lys Ile Ala Arg Lys	
	785 790 795 800	
40	gag agc cta gaa aat aaa aag aac aac aaa cca gaa gtc aac cag ata	2566
	Glu Ser Leu Glu Asn Lys Lys Asn Asn Lys Pro Glu Val Asn Gln Ile	
	805 810 815	
45	gcc aac agt gac aac aag gtt aca att gat gac tat aga gaa gag gat	2614
	Ala Asn Ser Asp Asn Lys Val Thr Ile Asp Asp Tyr Arg Glu Glu Asp	
	820 825 830	

	gaa gac aag gac ccc tat ccg cct tgc gat gtg cca gta ggg gaa gag	2662
	Glu Asp Lys Asp Pro Tyr Pro Pro Cys Asp Val Pro Val Gly Glu Glu	
	835 840 845	
5	gaa gag gaa gag gag gag gat gaa cct gag gtt cct gcc gga ccc cgt	2710
	Glu Glu Glu Glu Glu Glu Asp Glu Pro Glu Val Pro Ala Gly Pro Arg	
	850 855 860	
	cct cga agg atc tcg gag ttg aac atg aag gaa aaa att gcc ccc atc	2758
	Pro Arg Arg Ile Ser Glu Leu Asn Met Lys Glu Lys Ile Ala Pro Ile	
	865 870 875 880	
10	cct gaa ggg agc gct ttc ttc att ctt agc aag acc aac ccg atc cgc	2806
	Pro Glu Gly Ser Ala Phe Phe Ile Leu Ser Lys Thr Asn Pro Ile Arg	
	885 890 895	
	gta ggc tgc cac aag ctc atc aac cac cac atc ttc acc aac ctc atc	2854
15	Val Gly Cys His Lys Leu Ile Asn His His Ile Phe Thr Asn Leu Ile	
	900 905 910	
	ctt gtc ttc atc atg ctg agc agc gct gcc ctg gcc gca gag gac ccc	2902
	Leu Val Phe Ile Met Leu Ser Ser Ala Ala Leu Ala Ala Glu Asp Pro	
	915 920 925	
20	atc cgc agc cac tcc ttc cgg aac acg ata ctg ggt tac ttt gac tat	2950
	Ile Arg Ser His Ser Phe Arg Asn Thr Ile Leu Gly Tyr Phe Asp Tyr	
	930 935 940	
	gcc ttc aca gcc atc ttt act gtt gag atc ctg ttg aag atg aca act	2998
	Ala Phe Thr Ala Ile Phe Thr Val Glu Ile Leu Leu Lys Met Thr Thr	
	945 950 955 960	
25	ttt gga gct ttc ctc cac aaa ggg gcc ttc tgc agg aac tac ttc aat	3046
	Phe Gly Ala Phe Leu His Lys Gly Ala Phe Cys Arg Asn Tyr Phe Asn	
	965 970 975	
	ttg ctg gat atg ctg gtg gtt ggg gtg tct ctg gtg tca ttt ggg att	3094
30	Leu Leu Asp Met Leu Val Val Gly Val Ser Leu Val Ser Phe Gly Ile	
	980 985 990	
	caa tcc agt gcc atc tcc gtt gtg aag att ctg agg gtc tta agg gtc	3142
	Gln Ser Ser Ala Ile Ser Val Val Lys Ile Leu Arg Val Leu Arg Val	
	995 1000 1005	
35	ctg cgt ccc ctc agg gcc atc aac aga gca aaa gga ctt aag cac	3187
	Leu Arg Pro Leu Arg Ala Ile Asn Arg Ala Lys Gly Leu Lys His	
	1010 1015 1020	
	gtg gtc cag tgc gtc ttc gtg gcc atc cgg acc atc ggc aac atc	3232
	Val Val Gln Cys Val Phe Val Ala Ile Arg Thr Ile Gly Asn Ile	
	1025 1030 1035	
40	atg atc gtc act acc ctc ctg cag ttc atg ttt gcc tgt atc ggg	3277
	Met Ile Val Thr Thr Leu Leu Gln Phe Met Phe Ala Cys Ile Gly	
	1040 1045 1050	
45	gtc cag ttg ttc aag ggg aag ttc tat cgc tgt acg gat gaa gcc	3322
	Val Gln Leu Phe Lys Gly Lys Phe Tyr Arg Cys Thr Asp Glu Ala	
	1055 1060 1065	

	aaa agt	aac cct gaa gaa tgc	agg gga ctt ttc atc	ctc tac aag	3367
	Lys Ser	Asn Pro Glu Glu Cys	Arg Gly Leu Phe Ile	Leu Tyr Lys	
	1070	1075	1080		
5	gat ggg	gat gtt gac agt cct	gtg gtc cgt gaa cgg	atc tgg caa	3412
	Asp Gly	Asp Val Asp Ser Pro	Val Val Arg Glu Arg	Ile Trp Gln	
	1085	1090	1095		
	aac agt	gat ttc aac ttc gac	aac gtc ctc tct gct	atg atg gcg	3457
	Asn Ser	Asp Phe Asn Phe Asp	Asn Val Leu Ser Ala	Met Met Ala	
	1100	1105	1110		
10	ctc ttc	aca gtc tcc acg ttt	gag ggc tgg cct gcg	ttg ctg tat	3502
	Leu Phe	Thr Val Ser Thr Phe	Glu Gly Trp Pro Ala	Leu Leu Tyr	
	1115	1120	1125		
	aaa gcc	atc gac tcg aat gga	gag aac atc ggc cca	atc tac aac	3547
15	Lys Ala	Ile Asp Ser Asn Gly	Glu Asn Ile Gly Pro	Ile Tyr Asn	
	1130	1135	1140		
	cac cgc	gtg gag atc tcc atc	ttc ttc atc atc tac	atc atc att	3592
	His Arg	Val Glu Ile Ser Ile	Phe Phe Ile Ile Tyr	Ile Ile Ile	
	1145	1150	1155		
20	gta gct	ttc ttc atg atg aac	atc ttt gtg ggc ttt	gtc atc gtt	3637
	Val Ala	Phe Phe Met Met Asn	Ile Phe Val Gly Phe	Val Ile Val	
	1160	1165	1170		
	aca ttt	cag gaa caa gga gaa	aaa gag tat aag aac	tgt gag ctg	3682
	Thr Phe	Gln Glu Gln Gly Glu	Lys Glu Tyr Lys Asn	Cys Glu Leu	
	1175	1180	1185		
25	gac aaa	aat cag cgt cag tgt	gtt gaa tac gcc ttg	aaa gca cgt	3727
	Asp Lys	Asn Gln Arg Gln Cys	Val Glu Tyr Ala Leu	Lys Ala Arg	
	1190	1195	1200		
30	ccc ttg	cgg aga tac atc ccc	aaa aac ccc tac cag	tac aag ttc	3772
	Pro Leu	Arg Arg Tyr Ile Pro	Lys Asn Pro Tyr Gln	Tyr Lys Phe	
	1205	1210	1215		
	tgg tac	gtg gtg aac tct tcg	cct ttc gaa tac atg	atg ttt gtc	3817
	Trp Tyr	Val Val Asn Ser Ser	Pro Phe Glu Tyr Met	Met Phe Val	
	1220	1225	1230		
35	ctc atc	atg ctc aac aca ctc	tgc ttg gcc atg cag	cac tac gag	3862
	Leu Ile	Met Leu Asn Thr Leu	Cys Leu Ala Met Gln	His Tyr Glu	
	1235	1240	1245		
	cag tcc	aag atg ttc aat gat	gcc atg gac att ctg	aac atg gtc	3907
	Gln Ser	Lys Met Phe Asn Asp	Ala Met Asp Ile Leu	Asn Met Val	
	1250	1255	1260		
40	ttc acc	ggg gtg ttc acc gtc	gag atg gtt ttg aaa	gtc atc gca	3952
	Phe Thr	Gly Val Phe Thr Val	Glu Met Val Leu Lys	Val Ile Ala	
	1265	1270	1275		
45	ttt aag	cct aag ggg tat ttt	agt gac gcc tgg aac	acg ttt gac	3997
	Phe Lys	Pro Lys Gly Tyr Phe	Ser Asp Ala Trp Asn	Thr Phe Asp	
	1280	1285	1290		

	tcc	ctc	atc	gta	atc	ggc	agc	att	ata	gac	gtg	gcc	ctc	agc	gaa	4042
	Ser	Leu	Ile	Val	Ile	Gly	Ser	Ile	Ile	Asp	Val	Ala	Leu	Ser	Glu	
	1295						1300					1305				
5	gcg	gac	cca	act	gaa	agt	gaa	aat	gtc	cct	gtc	cca	act	gct	aca	4087
	Ala	Asp	Pro	Thr	Glu	Ser	Glu	Asn	Val	Pro	Val	Pro	Thr	Ala	Thr	
	1310						1315					1320				
	cct	ggg	aac	tct	gaa	gag	agc	aat	aga	atc	tcc	atc	acc	ttt	ttc	4132
	Pro	Gly	Asn	Ser	Glu	Glu	Ser	Asn	Arg	Ile	Ser	Ile	Thr	Phe	Phe	
	1325						1330					1335				
10	cgt	ctt	ttc	cga	gtg	atg	cga	ttg	gtg	aag	ctt	ctc	agc	agg	ggg	4177
	Arg	Leu	Phe	Arg	Val	Met	Arg	Leu	Val	Lys	Leu	Leu	Ser	Arg	Gly	
	1340						1345					1350				
	gaa	ggc	atc	cgg	aca	ttg	ctg	tgg	act	ttt	att	aag	tcc	ttt	cag	4222
15	Glu	Gly	Ile	Arg	Thr	Leu	Leu	Trp	Thr	Phe	Ile	Lys	Ser	Phe	Gln	
	1355						1360					1365				
	gcg	ctc	ccg	tat	gtg	gcc	ctc	ctc	ata	gcc	atg	ctg	ttc	ttc	atc	4267
	Ala	Leu	Pro	Tyr	Val	Ala	Leu	Leu	Ile	Ala	Met	Leu	Phe	Phe	Ile	
	1370						1375					1380				
20	tat	gcg	gtc	att	ggc	atg	cag	atg	ttt	ggg	aaa	gtt	gcc	atg	aga	4312
	Tyr	Ala	Val	Ile	Gly	Met	Gln	Met	Phe	Gly	Lys	Val	Ala	Met	Arg	
	1385						1390					1395				
	gat	aac	aac	cag	atc	aat	agg	aac	aat	aac	ttc	cag	acg	ttt	ccc	4357
	Asp	Asn	Asn	Gln	Ile	Asn	Arg	Asn	Asn	Asn	Phe	Gln	Thr	Phe	Pro	
	1400						1405					1410				
25	cag	gcg	gtg	ctg	ctg	ctc	ttc	agg	tgt	gca	aca	ggg	gag	gcc	tgg	4402
	Gln	Ala	Val	Leu	Leu	Leu	Phe	Arg	Cys	Ala	Thr	Gly	Glu	Ala	Trp	
	1415						1420					1425				
30	cag	gag	atc	atg	ctg	gcc	tgt	ctc	cca	ggg	aag	ctc	tgt	gac	cct	4447
	Gln	Glu	Ile	Met	Leu	Ala	Cys	Leu	Pro	Gly	Lys	Leu	Cys	Asp	Pro	
	1430						1435					1440				
	gag	tca	gat	tac	aac	ccc	ggg	gag	gag	tat	aca	tgt	ggg	agc	aac	4492
	Glu	Ser	Asp	Tyr	Asn	Pro	Gly	Glu	Glu	Tyr	Thr	Cys	Gly	Ser	Asn	
	1445						1450					1455				
35	ttt	gcc	att	gtc	tat	ttc	atc	agt	ttt	tac	atg	ctc	tgt	gca	ttt	4537
	Phe	Ala	Ile	Val	Tyr	Phe	Ile	Ser	Phe	Tyr	Met	Leu	Cys	Ala	Phe	
	1460						1465					1470				
	ctg	atc	atc	aat	ctg	ttt	gtg	gct	gtc	atc	atg	gat	aat	ttc	gac	4582
	Leu	Ile	Ile	Asn	Leu	Phe	Val	Ala	Val	Ile	Met	Asp	Asn	Phe	Asp	
	1475						1480					1485				
40	tat	ctg	acc	cgg	gac	tgg	tct	att</								

	agg	ata	aaa	cac	ctt	gat	gtg	gtc	act	ctg	ctt	cga	cgc	atc	cag	4717
	Arg	Ile	Lys	His	Leu	Asp	Val	Val	Thr	Leu	Leu	Arg	Arg	Ile	Gln	
	1520						1525					1530				
5	cct	ccc	ctg	ggg	ttt	ggg	aag	tta	tgt	cca	cac	agg	gta	gcg	tgc	4762
	Pro	Pro	Leu	Gly	Phe	Gly	Lys	Leu	Cys	Pro	His	Arg	Val	Ala	Cys	
	1535						1540					1545				
	aag	aga	tta	gtt	gcc	atg	aac	atg	cct	ctc	aac	agt	gac	ggg	aca	4807
	Lys	Arg	Leu	Val	Ala	Met	Asn	Met	Pro	Leu	Asn	Ser	Asp	Gly	Thr	
	1550						1555					1560				
10	gtc	atg	ttt	aat	gca	acc	ctg	ttt	gct	ttg	gtt	cga	acg	gct	ctt	4852
	Val	Met	Phe	Asn	Ala	Thr	Leu	Phe	Ala	Leu	Val	Arg	Thr	Ala	Leu	
	1565						1570					1575				
15	aag	atc	aag	acc	gaa	ggg	aac	ctg	gag	caa	gct	aat	gaa	gaa	ctt	4897
	Lys	Ile	Lys	Thr	Glu	Gly	Asn	Leu	Glu	Gln	Ala	Asn	Glu	Glu	Leu	
	1580						1585					1590				
	cgg	gct	gtg	ata	aag	aaa	att	tgg	aag	aaa	acc	agc	atg	aaa	tta	4942
	Arg	Ala	Val	Ile	Lys	Lys	Ile	Trp	Lys	Lys	Thr	Ser	Met	Lys	Leu	
	1595						1600					1605				
20	ctt	gac	caa	gtt	gtc	cct	cca	gct	ggt	gat	gat	gag	gta	acc	gtg	4987
	Leu	Asp	Gln	Val	Val	Pro	Pro	Ala	Gly	Asp	Asp	Glu	Val	Thr	Val	
	1610						1615					1620				
	ggg	aag	ttc	tat	gcc	act	ttc	ctg	ata	cag	gac	tac	ttt	agg	aaa	5032
	Gly	Lys	Phe	Tyr	Ala	Thr	Phe	Leu	Ile	Gln	Asp	Tyr	Phe	Arg	Lys	
	1625						1630					1635				
25	ttc	aag	aaa	cgg	aaa	gaa	caa	gga	ctg	gtg	gga	aag	tac	cct	gcg	5077
	Phe	Lys	Lys	Arg	Lys	Glu	Gln	Gly	Leu	Val	Gly	Lys	Tyr	Pro	Ala	
	1640						1645					1650				
30	aag	aac	acc	aca	att	gcc	cta	cag	gcg	gga	tta	agg	aca	ctg	cat	5122
	Lys	Asn	Thr	Thr	Ile	Ala	Leu	Gln	Ala	Gly	Leu	Arg	Thr	Leu	His	
	1655						1660					1665				
	gac	att	ggg	cca	gaa	atc	cgg	cgt	gct	ata	tcg	tgt	gat	ttg	caa	5167
	Asp	Ile	Gly	Pro	Glu	Ile	Arg	Arg	Ala	Ile	Ser	Cys	Asp	Leu	Gln	
	1670						1675					1680				
35	gat	gac	gag	cct	gag	gaa	aca	aaa	cga	gaa	gaa	gaa	gat	gat	gtg	5212
	Asp	Asp	Glu	Pro	Glu	Glu	Thr	Lys	Arg	Glu	Glu	Glu	Asp	Asp	Val	
	1685						1690					1695				
	ttc	aaa	aga	aat	ggt	gcc	ctg	ctt	gga	aac	cat	gtc	aat	cat	gtt	5257
	Phe	Lys	Arg	Asn	Gly	Ala	Leu	Leu	Gly	Asn	His	Val	Asn	His	Val	
	1700						1705					1710				
40	aat	agt	gat	agg	aga	gat	tcc	ctt	cag	cag	acc	aat	acc	acc	cac	5302
	Asn	Ser	Asp	Arg	Arg	Asp	Ser	Leu	Gln	Gln	Thr	Asn	Thr	Thr	His	
	1715						1720					1725				
45	cgt	ccc	ctg	cat	gtc	caa	agg	cct	tca	att	cca	cct	gca	agt	gat	5347
	Arg	Pro	Leu	His	Val	Gln	Arg	Pro	Ser	Ile	Pro	Pro	Ala	Ser	Asp	
	1730						1735					1740				

	act	gag	aaa	ccg	ctg	ttt	cct	cca	gca	gga	aat	tcg	gtg	tgt	cat	5392
	Thr	Glu	Lys	Pro	Leu	Phe	Pro	Pro	Ala	Gly	Asn	Ser	Val	Cys	His	
		1745					1750					1755				
5	aac	cat	cat	aac	cat	aat	tcc	ata	gga	aag	caa	gtt	ccc	acc	tca	5437
	Asn	His	His	Asn	His	Asn	Ser	Ile	Gly	Lys	Gln	Val	Pro	Thr	Ser	
		1760					1765					1770				
	aca	aat	gcc	aat	ctc	aat	aat	gcc	aat	atg	tcc	aaa	gct	gcc	cat	5482
	Thr	Asn	Ala	Asn	Leu	Asn	Asn	Ala	Asn	Met	Ser	Lys	Ala	Ala	His	
		1775					1780					1785				
10	gga	aag	cgg	ccc	agc	att	ggg	aac	ctt	gag	cat	gtg	tct	gaa	aat	5527
	Gly	Lys	Arg	Pro	Ser	Ile	Gly	Asn	Leu	Glu	His	Val	Ser	Glu	Asn	
		1790					1795					1800				
	ggg	cat	cat	tct	tcc	cac	aag	cat	gac	cgg	gag	cct	cag	aga	agg	5572
15	Gly	His	His	Ser	Ser	His	Lys	His	Asp	Arg	Glu	Pro	Gln	Arg	Arg	
		1805					1810					1815				
	tcc	agt	gtg	aaa	aga	acc	cgc	tat	tat	gaa	act	tac	att	agg	tcc	5617
	Ser	Ser	Val	Lys	Arg	Thr	Arg	Tyr	Tyr	Glu	Thr	Tyr	Ile	Arg	Ser	
		1820					1825					1830				
20	gac	tca	gga	gat	gaa	cag	ctc	cca	act	att	tgc	cgg	gaa	gac	cca	5662
	Asp	Ser	Gly	Asp	Glu	Gln	Leu	Pro	Thr	Ile	Cys	Arg	Glu	Asp	Pro	
		1835					1840					1845				
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	Glu	Ile	His	Gly	Tyr	Phe	Arg	Asp	Pro	His	Cys	Leu	Gly	Glu	Gln	
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	Gly	Phe	Leu	Glu	Asp	Asp	Asp	Ser	Pro	Val	Cys	Tyr	Asp	Ser	Arg	
		1910					1915					1920				
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	Arg	Ser	Pro	Arg	Arg	Arg	Leu	Leu	Pro	Pro	Thr	Pro	Ala	Ser	His	
		1925					1930					1935				
40	cgg	aga	tcc	tcc	ttc	aac	ttt	gag	tgc	ctg	cgc	cgg	cag	agc	agc	5977

	ctg Leu	cct Pro	ctg Leu	cat His	cta Leu	atg Met	cag Gln	caa Gln	cag Gln	atc Ile	atg Met	gca Ala	gtt Val	gcc Ala	ggc Gly	6067	
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5	cta Leu	gat Asp	tca Ser	agt Ser	aaa Lys	gcc Ala	cag Gln	aag Lys	tac Tyr	tca Ser	cct Pro	agt Ser	cac His	tct Ser	acc Thr	6112	
	1985						1990			1995							
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10	aca Thr	cct Pro	tgc Cys	tac Tyr	acc Thr	ccc Pro	ctg Leu	atc Ile	caa Gln	gtg Val	gag Glu	cag Gln	tca Ser	gag Glu	gcc Ala	6202	
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 20 25 30

20 Pro Leu Ser Gly Glu Gly Pro Thr Ser Gln Pro Asn Ser Ser Lys Gln
 35 40 45

Thr Val Leu Ser Trp Gln Ala Ala Ile Asp Ala Ala Arg Gln Ala Lys
 50 55 60

Ala Ala Gln Thr Met Ser Thr Ser Ala Pro Pro Pro Val Gly Ser Leu
 65 70 75 80

25 Ser Gln Arg Lys Arg Gln Gln Tyr Ala Lys Ser Lys Lys Gln Gly Asn
 85 90 95

Ser Ser Asn Ser Arg Pro Ala Arg Ala Leu Phe Cys Leu Ser Leu Asn
 100 105 110

30 Asn Pro Ile Arg Arg Ala Cys Ile Ser Ile Val Glu Trp Lys Pro Phe
 115 120 125

Asp Ile Phe Ile Leu Leu Ala Ile Phe Ala Asn Cys Val Ala Leu Ala
 130 135 140

Ile Tyr Ile Pro Phe Pro Glu Asp Asp Ser Asn Ser Thr Asn His Asn
145 150 155 160

Leu Glu Lys Val Glu Tyr Ala Phe Leu Ile Ile Phe Thr Val Glu Thr
165 170 175

5 Phe Leu Lys Ile Ile Ala Tyr Gly Leu Leu Leu His Pro Asn Ala Tyr
180 185 190

Val Arg Asn Gly Trp Asn Leu Leu Asp Phe Val Ile Val Ile Val Gly
195 200 205

10 Leu Phe Ser Val Ile Leu Glu Gln Leu Thr Lys Glu Thr Glu Gly Gly
210 215 220

Asn His Ser Ser Gly Lys Ser Gly Gly Phe Asp Val Lys Ala Leu Arg
225 230 235 240

Ala Phe Arg Val Leu Arg Pro Leu Arg Leu Val Ser Gly Val Pro Ser
245 250 255

15 Leu Gln Val Val Leu Asn Ser Ile Ile Lys Ala Met Val Pro Leu Leu
260 265 270

His Ile Ala Leu Leu Val Leu Phe Val Ile Ile Ile Tyr Ala Ile Ile
275 280 285

20 Gly Leu Glu Leu Phe Ile Gly Lys Met His Lys Thr Cys Phe Phe Ala
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Asp Ser Asp Ile Val Ala Glu Glu Asp Pro Ala Pro Cys Ala Phe Ser
305 310 315 320

Gly Asn Gly Arg Gln Cys Thr Ala Asn Gly Thr Glu Cys Arg Ser Gly
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Ala Met Leu Thr Val Phe Gln Cys Ile Thr Met Glu Gly Trp Thr Asp
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Tyr Phe Val Ser Leu Ile Ile Leu Gly Ser Phe Phe Val Leu Asn Leu
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405 410 415

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Glu Asp Leu Lys Gly Tyr Leu Asp Trp Ile Thr Gln Ala Glu Asp Ile
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Gly Gln Ala Ile Ser Lys Ser Lys Leu Ser Arg Arg Trp Arg Arg Trp
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Ser Ser Glu His Tyr Asn Gln Pro Asp Trp Leu Thr Gln Ile Gln Asp
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25 Ile Ala Asn Lys Val Leu Leu Ala Leu Phe Thr Cys Glu Met Leu Val
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Lys Met Tyr Ser Leu Gly Leu Gln Ala Tyr Phe Val Ser Leu Phe Asn
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30 Arg Phe Asp Cys Phe Val Val Cys Gly Gly Ile Thr Glu Thr Ile Leu
610 615 620

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Ile Leu Thr Gly Glu Asp Trp Asn Ala Val Met Tyr Asp Gly Ile Met
725 730 735

15 Ala Tyr Gly Gly Pro Ser Ser Ser Gly Met Ile Val Cys Ile Tyr Phe
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Gln Lys Glu Glu Ala Glu Glu Lys Glu Arg Lys Lys Ile Ala Arg Lys
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Glu Ser Leu Glu Asn Lys Lys Asn Asn Lys Pro Glu Val Asn Gln Ile
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25 Ala Asn Ser Asp Asn Lys Val Thr Ile Asp Asp Tyr Arg Glu Glu Asp
820 825 830

Glu Asp Lys Asp Pro Tyr Pro Pro Cys Asp Val Pro Val Gly Glu Glu
835 840 845

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Pro Arg Arg Ile Ser Glu Leu Asn Met Lys Glu Lys Ile Ala Pro Ile
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Pro Glu Gly Ser Ala Phe Phe Ile Leu Ser Lys Thr Asn Pro Ile Arg
885 890 895

5 Val Gly Cys His Lys Leu Ile Asn His His Ile Phe Thr Asn Leu Ile
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Leu Val Phe Ile Met Leu Ser Ser Ala Ala Leu Ala Ala Glu Asp Pro
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10 Ile Arg Ser His Ser Phe Arg Asn Thr Ile Leu Gly Tyr Phe Asp Tyr
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20 Leu Arg Pro Leu Arg Ala Ile Asn Arg Ala Lys Gly Leu Lys His
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Arg Asn Ile Asp Ser Glu Arg Pro Arg Gly Tyr His His Pro Gln
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Met Glu Pro Ser
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Ser Pro Gln Asp Glu Gly Leu Arg Lys Lys Gln Pro Lys Lys Pro Leu
5 10 15 20

ccc gag gtc ctg ccc agg ccg ccg cgg gct ctg ttc tgc ctg acc ctg 333
Pro Glu Val Leu Pro Arg Pro Pro Arg Ala Leu Phe Cys Leu Thr Leu
15 25 30 35

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Gln Asn Pro Leu Arg Lys Ala Cys Ile Ser Ile Val Glu Trp Lys Pro
40 45 50

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Phe Glu Thr Ile Ile Leu Leu Thr Ile Phe Ala Asn Cys Val Ala Leu
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	Ile	Gly	Leu	Glu	Leu	Phe	Lys	Gly	Lys	Met	His	Lys	Thr	Cys	Tyr	Tyr	
			215					220					225				
	atc	ggg	aca	gac	atc	gtg	gcc	aca	gtg	gag	aat	gag	aag	ccc	tcg	ccc	957
	Ile	Gly	Thr	Asp	Ile	Val	Ala	Thr	Val	Glu	Asn	Glu	Lys	Pro	Ser	Pro	
			230				235					240					
10	tgc	gct	agg	acg	ggc	tcg	ggg	cgc	ccc	tgc	acc	atc	aac	ggc	agc	gag	1005
	Cys	Ala	Arg	Thr	Gly	Ser	Gly	Arg	Pro	Cys	Thr	Ile	Asn	Gly	Ser	Glu	
			245			250					255					260	
15	tgc	cgg	ggc	ggc	tgg	cgg	ggg	ccc	aac	cac	ggc	atc	acg	cac	ttc	gac	1053
	Cys	Arg	Gly	Gly	Trp	Pro	Gly	Pro	Asn	His	Gly	Ile	Thr	His	Phe	Asp	
					265				270						275		
	aac	ttc	ggc	ttc	tcc	atg	ctc	acc	gtg	tac	cag	tgc	atc	acc	atg	gag	1101
	Asn	Phe	Gly	Phe	Ser	Met	Leu	Thr	Val	Tyr	Gln	Cys	Ile	Thr	Met	Glu	
				280					285					290			
20	ggc	tgg	aca	gat	gtc	ctc	tac	tgg	gtc	aac	gat	gcc	atc	ggg	aac	gag	1149
	Gly	Trp	Thr	Asp	Val	Leu	Tyr	Trp	Val	Asn	Asp	Ala	Ile	Gly	Asn	Glu	
			295					300				305					
	tgg	ccc	tgg	atc	tac	ttt	gtc	act	ctc	atc	ctg	ctg	ggg	tcc	ttc	ttc	1197
	Trp	Pro	Trp	Ile	Tyr	Phe	Val	Thr	Leu	Ile	Leu	Leu	Gly	Ser	Phe	Phe	
			310				315					320					
25	atc	ctc	aac	ctg	gtg	ctg	ggc	gtc	ctg	agt	ggg	gaa	ttc	acc	aag	gag	1245
	Ile	Leu	Asn	Leu	Val	Leu	Gly	Val	Leu	Ser	Gly	Glu	Phe	Thr	Lys	Glu	
			325			330					335					340	
30	cgg	gag	aag	gcc	aag	tcc	agg	gga	acc	ttc	cag	aag	ctg	cgg	gag	aag	1293
	Arg	Glu	Lys	Ala	Lys	Ser	Arg	Gly	Thr	Phe	Gln	Lys	Leu	Arg	Glu	Lys	
				345						350					355		
	cag	cag	ctg	gag	gag	gac	ctt	cgg	ggc	tac	atg	agc	tgg	atc	acg	cag	1341
	Gln	Gln	Leu	Glu	Glu	Asp	Leu	Arg	Gly	Tyr	Met	Ser	Trp	Ile	Thr	Gln	
				360				365					370				
35	ggc	gag	gtc	atg	gac	gtg	gag	gac	ctg	aga	gaa	gga	aag	ctg	tcc	ttg	1389
	Gly	Glu	Val	Met	Asp	Val	Glu	Asp	Leu	Arg	Glu	Gly	Lys	Leu	Ser	Leu	
			375				380						385				
	gaa	gag	gga	ggc	tcc	gac	acg	gaa	agc	ctg	tac	gaa	atc	gag	ggc	ttg	1437
	Glu	Glu	Gly	Gly	Ser	Asp	Thr	Glu	Ser	Leu	Tyr	Glu	Ile	Glu	Gly	Leu	
			390				395					400					
40	aac	aaa	atc	atc	cag	ttc	atc	cga	cac	tgg	agg	cag	tgg	aac	cgt	gtc	1485
	Asn	Lys	Ile	Ile	Gln	Phe	Ile	Arg	His	Trp	Arg	Gln	Trp	Asn	Arg	Val	
			405			410					415					420	
45	ttt	cgc	tgg	aag	tgc	cat	gac	ctg	gtg	aag	tcg	aga	gtc	ttc	tac	tgg	1533
	Phe	Arg	Trp	Lys	Cys	His	Asp	Leu	Val	Lys	Ser	Arg	Val	Phe	Tyr	Trp	
					425					430					435		

	ctg gtc atc ctg atc gtg gcc ctc aac acc ctg tcc atc gcc tcg gag	1581
	Leu Val Ile Leu Ile Val Ala Leu Asn Thr Leu Ser Ile Ala Ser Glu	
	440 445 450	
5	cac cac aac cag ccg ctc tgg ctg acc cac ttg caa gac atc gcc aat	1629
	His His Asn Gln Pro Leu Trp Leu Thr His Leu Gln Asp Ile Ala Asn	
	455 460 465	
	cga gtg ctg ctg tca ctc ttc acc atc gag atg ctg ctg aag atg tac	1677
	Arg Val Leu Leu Ser Leu Phe Thr Ile Glu Met Leu Leu Lys Met Tyr	
	470 475 480	
10	ggg ctg ggc ctg cgc cag tac ttc atg tcc atc ttc aac cgc ttc gac	1725
	Gly Leu Gly Leu Arg Gln Tyr Phe Met Ser Ile Phe Asn Arg Phe Asp	
	485 490 495 500	
	tgc ttc gtg gtg tgc agc ggc atc ctg gag ctg ctg ctg gtg gag tcg	1773
15	Cys Phe Val Val Cys Ser Gly Ile Leu Glu Leu Leu Leu Val Glu Ser	
	505 510 515	
	ggc gcc atg acg ccg ctg ggc atc tcc gtg ttg cgc tgc atc cgc ctc	1821
	Gly Ala Met Thr Pro Leu Gly Ile Ser Val Leu Arg Cys Ile Arg Leu	
	520 525 530	
20	ctg agg ctc ttc aag atc acc aag tac tgg acg tcg ctc agc aac ctg	1869
	Leu Arg Leu Phe Lys Ile Thr Lys Tyr Trp Thr Ser Leu Ser Asn Leu	
	535 540 545	
	gtg gcc tcc ctg ctc aac tcc atc cgc tcc atc gcc tcg ctg ctg ctg	1917
	Val Ala Ser Leu Leu Asn Ser Ile Arg Ser Ile Ala Ser Leu Leu Leu	
	550 555 560	
25	ctg ctc ttc ctc ttc atc atc atc ttc gcc ctg ctg ggc atg cag ctc	1965
	Leu Leu Phe Leu Phe Ile Ile Ile Phe Ala Leu Leu Gly Met Gln Leu	
	565 570 575 580	
	ttc ggg ggg cgg tac gac ttc gag gac acg gaa gtg cga cgc agc aac	2013
30	Phe Gly Gly Arg Tyr Asp Phe Glu Asp Thr Glu Val Arg Arg Ser Asn	
	585 590 595	
	ttc gac aac ttc ccc cag gcc ctc atc agc gtc ttc cag gtg ctg acg	2061
	Phe Asp Asn Phe Pro Gln Ala Leu Ile Ser Val Phe Gln Val Leu Thr	
	600 605 610	
35	ggg gag gac tgg aac tcc gtg atg tac aac ggg atc atg gcc tac gga	2109
	Gly Glu Asp Trp Asn Ser Val Met Tyr Asn Gly Ile Met Ala Tyr Gly	
	615 620 625	
	ggc ccg tcc tac ccg ggc gtt ctc gtg tgc atc tat ttc atc atc ctt	2157
	Gly Pro Ser Tyr Pro Gly Val Leu Val Cys Ile Tyr Phe Ile Ile Leu	
	630 635 640	
40	ttt gtc tgc ggc aac tat atc ctg ctg aat gtc ttc ctg gcc atc gcc	2205
	Phe Val Cys Gly Asn Tyr Ile Leu Leu Asn Val Phe Leu Ala Ile Ala	
	645 650 655 660	
45	gtg gac aac ctg gcc gag gcg gag agc ctg act tcc gcg caa aag gcc	2253
	Val Asp Asn Leu Ala Glu Ala Glu Ser Leu Thr Ser Ala Gln Lys Ala	
	665 670 675	

	aag gcc gag gag agg aaa cgc agg aag atg tcc agg ggt ctc cct gac	2301
	Lys Ala Glu Glu Arg Lys Arg Arg Lys Met Ser Arg Gly Leu Pro Asp	
	680 685 690	
5	aag aca gag gag gag aag tot gtg atg gcc aag aag ctg gag cag aag	2349
	Lys Thr Glu Glu Glu Lys Ser Val Met Ala Lys Lys Leu Glu Gln Lys	
	695 700 705	
	ccc aag ggg gag ggc atc ccc acc act gcc aag ctc aag gtc gat gag	2397
	Pro Lys Gly Glu Gly Ile Pro Thr Thr Ala Lys Leu Lys Val Asp Glu	
	710 715 720	
10	ttc gaa tct aac gtc aac gag gtg aag gac ccc tac cct tca gct gac	2445
	Phe Glu Ser Asn Val Asn Glu Val Lys Asp Pro Tyr Pro Ser Ala Asp	
	725 730 735 740	
	ttc cca ggg gat gat gag gag gac gag cct gag atc cca gtg agc ccc	2493
15	Phe Pro Gly Asp Asp Glu Glu Asp Glu Pro Glu Ile Pro Val Ser Pro	
	745 750 755	
	cga ccg cgc ccg ctg gcc gag ctg cag ctc aaa gag aag gca gtg ccc	2541
	Arg Pro Arg Pro Leu Ala Glu Leu Gln Leu Lys Glu Lys Ala Val Pro	
	760 765 770	
20	atc ccg gaa gcc agc tcc ttc ttc atc ttc agt ccc acc aat aag gtc	2589
	Ile Pro Glu Ala Ser Ser Phe Phe Ile Phe Ser Pro Thr Asn Lys Val	
	775 780 785	
	cgt gtc ctg tgt cac cgc atc gtc aac gcc acc tgg ttc acc aac ttc	2637
	Arg Val Leu Cys His Arg Ile Val Asn Ala Thr Trp Phe Thr Asn Phe	
	790 795 800	
25	atc ctg ctc ttc atc ctg ctc agc agt gct gcg ctg gcc gcc gag gac	2685
	Ile Leu Leu Phe Ile Leu Leu Ser Ser Ala Ala Leu Ala Ala Glu Asp	
	805 810 815 820	
	ccc atc cgg gcg gag tcc gtg agg aat cag atc ctt gga tat ttt gat	2733
30	Pro Ile Arg Ala Glu Ser Val Arg Asn Gln Ile Leu Gly Tyr Phe Asp	
	825 830 835	
	att gcc ttc acc tct gtc ttc act gtg gag att gtc ctc aag atg acg	2781
	Ile Ala Phe Thr Ser Val Phe Thr Val Glu Ile Val Leu Lys Met Thr	
	840 845 850	
35	acc tac ggc gcc ttc ctg cac aag ggc tcc ttc tgc cgc aac tac ttc	2829
	Thr Tyr Gly Ala Phe Leu His Lys Gly Ser Phe Cys Arg Asn Tyr Phe	
	855 860 865	
	aac atc ctg gac ctg ctg gtg gtg gct gtg tct ctc atc tcc atg ggt	2877
	Asn Ile Leu Asp Leu Leu Val Val Ala Val Ser Leu Ile Ser Met Gly	
	870 875 880	
40	ctc gag tcc agc acc atc tcc gtg gta aag atc ctg aga gtg cta agg	2925
	Leu Glu Ser Ser Thr Ile Ser Val Val Lys Ile Leu Arg Val Leu Arg	
	885 890 895 900	
45	gtg ctc cgg ccc ctg cga gcc atc aac aga gcc aaa ggg ttg aag cac	2973
	Val Leu Arg Pro Leu Arg Ala Ile Asn Arg Ala Lys Gly Leu Lys His	
	905 910 915	

	gtg gtc cag tgc gtg ttc gtg gcc atc cgc acc atc ggg aac atc gtc	3021
	Val Val Gln Cys Val Phe Val Ala Ile Arg Thr Ile Gly Asn Ile Val	
	920 925 930	
5	ctg gtc acc acg ctc ctg cag ttc atg ttc gcc tgc att ggt gtc cag	3069
	Leu Val Thr Thr Leu Leu Gln Phe Met Phe Ala Cys Ile Gly Val Gln	
	935 940 945	
	ctc ttc aag ggc aag ttc ttc agc tgc aac gac cta tcc aag atg aca	3117
	Leu Phe Lys Gly Lys Phe Phe Ser Cys Asn Asp Leu Ser Lys Met Thr	
	950 955 960	
10	gaa gag gag tgc agg ggc tac tac tat gtg tac aag gac ggg gac ccc	3165
	Glu Glu Glu Cys Arg Gly Tyr Tyr Tyr Val Tyr Lys Asp Gly Asp Pro	
	965 970 975 980	
15	acg cag atg gag ctg cgc ccc cgc cag tgg ata cac aat gac ttc cac	3213
	Thr Gln Met Glu Leu Arg Pro Arg Gln Trp Ile His Asn Asp Phe His	
	985 990 995	
	ttt gac aac gtg ctg tcg gcc atg atg tcg ctc ttc acg gtg tcc	3258
	Phe Asp Asn Val Leu Ser Ala Met Met Ser Leu Phe Thr Val Ser	
	1000 1005 1010	
20	acc ttc gag gga tgg ccc cag ctg ctg tac agg gcc ata gac tcc	3303
	Thr Phe Glu Gly Trp Pro Gln Leu Leu Tyr Arg Ala Ile Asp Ser	
	1015 1020 1025	
	aac gag gag gac atg ggc ccc gtt tac aac aac cga gtg gag atg	3348
	Asn Glu Glu Asp Met Gly Pro Val Tyr Asn Asn Arg Val Glu Met	
	1030 1035 1040	
25	gcc atc ttc ttc atc atc tac atc atc ctc att gcc ttc ttc atg	3393
	Ala Ile Phe Phe Ile Ile Tyr Ile Ile Leu Ile Ala Phe Phe Met	
	1045 1050 1055	
30	atg aac atc ttt gtg ggc ttt gtc atc gtc acc ttc cag gag cag	3438
	Met Asn Ile Phe Val Gly Phe Val Ile Val Thr Phe Gln Glu Gln	
	1060 1065 1070	
	ggg gag aca gag tac aag aac tgc gag ctg gac aag aac cag cgc	3483
	Gly Glu Thr Glu Tyr Lys Asn Cys Glu Leu Asp Lys Asn Gln Arg	
	1075 1080 1085	
35	cag tgt gtg cag tat gcc ctg aag gcc cgc cca ctt cgg tgc tac	3528
	Gln Cys Val Gln Tyr Ala Leu Lys Ala Arg Pro Leu Arg Cys Tyr	
	1090 1095 1100	
	atc ccc aag aac cca tac cag tac cag gtg tgg tac gtc gtc acc	3573
	Ile Pro Lys Asn Pro Tyr Gln Tyr Gln Val Trp Tyr Val Val Thr	
	1105 1110 1115	
40	tcc tcc tac ttt gaa tac ctg atg ttc gcc ctc atc atg ctc aac	3618
	Ser Ser Tyr Phe Glu Tyr Leu Met Phe Ala Leu Ile Met Leu Asn	
	1120 1125 1130	
45	acc atc tgc ctg ggc atg cag cac tac cac cag tcg gag gag atg	3663
	Thr Ile Cys Leu Gly Met Gln His Tyr His Gln Ser Glu Glu Met	
	1135 1140 1145	

	aac	cac	atc	tcg	gac	atc	ctc	aac	gtg	gcc	ttc	acc	atc	atc	ttc	3708
	Asn	His	Ile	Ser	Asp	Ile	Leu	Asn	Val	Ala	Phe	Thr	Ile	Ile	Phe	
				1150					1155						1160	
5	aca	ctg	gag	atg	atc	ctc	aag	ctc	ttg	gcg	ttc	aag	gcc	agg	ggc	3753
	Thr	Leu	Glu	Met	Ile	Leu	Lys	Leu	Leu	Ala	Phe	Lys	Ala	Arg	Gly	
				1165					1170						1175	
	tat	ttc	gga	gac	ccc	tgg	aat	gtg	ttc	gac	ttc	ctg	atc	gtc	atc	3798
	Tyr	Phe	Gly	Asp	Pro	Trp	Asn	Val	Phe	Asp	Phe	Leu	Ile	Val	Ile	
				1180					1185						1190	
10	ggc	agc	atc	att	gac	gtc	atc	ctc	agc	gag	atc	gac	act	ttc	ctg	3843
	Gly	Ser	Ile	Ile	Asp	Val	Ile	Leu	Ser	Glu	Ile	Asp	Thr	Phe	Leu	
				1195					1200						1205	
15	gcc	tcc	agc	ggg	gga	ctg	tat	tgc	ctg	ggt	ggc	ggc	tgc	ggg	aac	3888
	Ala	Ser	Ser	Gly	Gly	Leu	Tyr	Cys	Leu	Gly	Gly	Gly	Cys	Gly	Asn	
				1210					1215						1220	
	gtt	gac	cca	gac	gag	agc	gcc	cgc	atc	tcc	agt	gcc	ttc	ttc	cgc	3933
	Val	Asp	Pro	Asp	Glu	Ser	Ala	Arg	Ile	Ser	Ser	Ala	Phe	Phe	Arg	
				1225					1230						1235	
20	ctg	ttc	cgg	gtc	atg	agg	ctg	atc	aag	ctg	ctg	agt	cgg	gcc	gag	3978
	Leu	Phe	Arg	Val	Met	Arg	Leu	Ile	Lys	Leu	Leu	Ser	Arg	Ala	Glu	
				1240					1245						1250	
	ggc	gtg	cgc	acg	ctg	ctg	tgg	acg	ttc	atc	aag	tcc	ttc	cag	gcc	4023
	Gly	Val	Arg	Thr	Leu	Leu	Trp	Thr	Phe	Ile	Lys	Ser	Phe	Gln	Ala	
				1255					1260						1265	
25	ctg	ccc	tac	gtg	gcc	ctg	ctc	atc	gtc	atg	ctg	ttc	ttc	atc	tac	4068
	Leu	Pro	Tyr	Val	Ala	Leu	Leu	Ile	Val	Met	Leu	Phe	Phe	Ile	Tyr	
				1270					1275						1280	
30	gcc	gtc	atc	ggc	atg	cag	atg	ttt	gga	aag	atc	gcc	ctg	gtg	gac	4113
	Ala	Val	Ile	Gly	Met	Gln	Met	Phe	Gly	Lys	Ile	Ala	Leu	Val	Asp	
				1285					1290						1295	
	ggg	acc	cag	atc	aac	cgc	aac	aac	aac	ttc	cag	acc	ttc	ccg	cag	4158
	Gly	Thr	Gln	Ile	Asn	Arg	Asn	Asn	Asn	Phe	Gln	Thr	Phe	Pro	Gln	
				1300					1305						1310	
35	gcc	gtg	ctg	ctg	ctc	ttc	agg	tgt	gcg	aca	ggg	gag	gag	tgg	caa	4203
	Ala	Val	Leu	Leu	Leu	Phe	Arg	Cys	Ala	Thr	Gly	Glu	Ala	Trp	Gln	
				1315					1320						1325	
	gag	atc	ctg	ctg	gcc	tgc	agc	tac	ggg	aag	ttg	tgc	gac	cca	gag	4248
	Glu	Ile	Leu	Leu	Ala	Cys	Ser	Tyr	Gly	Lys	Leu	Cys	Asp	Pro	Glu	
				1330					1335						1340	
40	tca	gac	tac	gcc	ccg	ggc	gag	gag	tac	acg	tgt	ggc	acc	aac	ttc	4293
	Ser	Asp	Tyr	Ala	Pro	Gly	Glu	Glu	Tyr	Thr	Cys	Gly	Thr	Asn	Phe	
				1345					1350						1355	
45	gcc	tac	tac	tac	ttc	atc	agc	ttc	tac	atg	ctc	tgc	gcc	ttc	ctg	4338
	Ala	Tyr	Tyr	Tyr	Phe	Ile	Ser	Phe	Tyr	Met	Leu	Cys	Ala	Phe	Leu	
				1360					1365						1370	

	atc	atc	aac	ctc	ttc	gtg	gct	gtc	atc	atg	gac	aac	ttt	gac	tac	4383
	Ile	Ile	Asn	Leu	Phe	Val	Ala	Val	Ile	Met	Asp	Asn	Phe	Asp	Tyr	
				1375					1380					1385		
5	ctg	aca	cgc	gac	tgg	tcc	atc	ctg	ggc	cct	cac	cac	ctg	gac	gag	4428
	Leu	Thr	Arg	Asp	Trp	Ser	Ile	Leu	Gly	Pro	His	His	Leu	Asp	Glu	
				1390					1395					1400		
	ttc	aag	gct	atc	tgg	gca	gag	tat	gac	cca	gag	gcc	aag	ggg	cga	4473
	Phe	Lys	Ala	Ile	Trp	Ala	Glu	Tyr	Asp	Pro	Glu	Ala	Lys	Gly	Arg	
				1405					1410					1415		
10	atc	aag	cac	ctg	gac	gtg	gtg	acc	ctg	ctg	aga	agg	atc	cag	ccc	4518
	Ile	Lys	His	Leu	Asp	Val	Val	Thr	Leu	Leu	Arg	Arg	Ile	Gln	Pro	
				1420					1425					1430		
15	cct	ctg	ggc	ttc	ggg	aag	ttc	tgt	cca	cac	cgg	gtg	gcc	tgt	aag	4563
	Pro	Leu	Gly	Phe	Gly	Lys	Phe	Cys	Pro	His	Arg	Val	Ala	Cys	Lys	
				1435					1440					1445		
	cgc	ctg	gtg	ggc	atg	aac	atg	ccc	ctg	aac	agt	gac	ggc	acg	gtc	4608
	Arg	Leu	Val	Gly	Met	Asn	Met	Pro	Leu	Asn	Ser	Asp	Gly	Thr	Val	
				1450					1455					1460		
20	acc	ttc	aat	gcc	acg	ctc	ttt	gcc	ctg	gtg	cgc	acg	gcc	ctc	aag	4653
	Thr	Phe	Asn	Ala	Thr	Leu	Phe	Ala	Leu	Val	Arg	Thr	Ala	Leu	Lys	
				1465					1470					1475		
	atc	aag	aca	gaa	ggg	aac	ttt	gag	cag	gcc	aac	gag	gag	ctg	agg	4698
	Ile	Lys	Thr	Glu	Gly	Asn	Phe	Glu	Gln	Ala	Asn	Glu	Glu	Leu	Arg	
				1480					1485					1490		
25	gcc	atc	atc	aag	aag	atc	tgg	aag	aga	acc	agc	atg	aag	ctg	ctg	4743
	Ala	Ile	Ile	Lys	Lys	Ile	Trp	Lys	Arg	Thr	Ser	Met	Lys	Leu	Leu	
				1495					1500					1505		
30	gac	cag	gtc	atc	cct	ccc	ata	gga	gat	gac	gag	gtg	acc	gtg	ggg	4788
	Asp	Gln	Val	Ile	Pro	Pro	Ile	Gly	Asp	Asp	Glu	Val	Thr	Val	Gly	
				1510					1515					1520		
	aag	ttc	tac	gcc	aca	ttc	ctc	atc	cag	gag	cac	ttc	cgg	aag	ttc	4833
	Lys	Phe	Tyr	Ala	Thr	Phe	Leu	Ile	Gln	Glu	His	Phe	Arg	Lys	Phe	
				1525					1530					1535		
35	atg	aag	cgc	cag	gag	gaa	tat	tat	ggg	tat	cgg	ccc	aag	aag	gac	4878
	Met	Lys	Arg	Gln	Glu	Glu	Tyr	Tyr	Gly	Tyr	Arg	Pro	Lys	Lys	Asp	
				1540					1545					1550		
	acc	gtg	cag	atc	cag	gct	ggg	ctg	cgg	acc	ata	gag	gag	gag	gcg	4923
	Thr	Val	Gln	Ile	Gln	Ala	Gly	Leu	Arg	Thr	Ile	Glu	Glu	Glu	Ala	
				1555					1560					1565		
40	gcc	cct	gag	atc	cgc	cgc	acc	atc	tca	gga	gac	ctg	acc	gcc	gag	4968
	Ala	Pro	Glu	Ile	Arg	Arg	Thr	Ile	Ser	Gly	Asp	Leu	Thr	Ala	Glu	
				1570					1575					1580		
45	gag	gag	ctg	gag	aga	gcc	atg	gtg	gag	gct	gcg	atg	gag	gag	agg	5013
	Glu	Glu	Leu	Glu	Arg	Ala	Met	Val	Glu	Ala	Ala	Met	Glu	Glu	Arg	
				1585					1590					1595		

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	atc	ttc	cgg	agg	acg	gga	ggc	ctg	ttt	ggc	cag	gtg	gac	acc	ttc	5058
	Ile	Phe	Arg	Arg	Thr	Gly	Gly	Leu	Phe	Gly	Gln	Val	Asp	Thr	Phe	
				1600					1605					1610		
5	ctg	gaa	agg	acc	aac	tcc	ctg	ccc	ccg	gtg	atg	gcc	aac	caa	aga	5103
	Leu	Glu	Arg	Thr	Asn	Ser	Leu	Pro	Pro	Val	Met	Ala	Asn	Gln	Arg	
				1615					1620					1625		
	ccg	ctc	cag	ttt	gct	gag	ata	gaa	atg	gaa	gag	ctt	gag	tcg	cct	5148
	Pro	Leu	Gln	Phe	Ala	Glu	Ile	Glu	Met	Glu	Glu	Leu	Glu	Ser	Pro	
				1630					1635					1640		
10	gtc	ttc	ttg	gag	gac	ttc	cct	caa	gat	gca	aga	acc	aac	cct	ctc	5193
	Val	Phe	Leu	Glu	Asp	Phe	Pro	Gln	Asp	Ala	Arg	Thr	Asn	Pro	Leu	
				1645					1650					1655		
	gct	cgt	gcc	aat	acc	aac	aac	gcc	aat	gcc	aat	gtt	gcc	tat	ggc	5238
15	Ala	Arg	Ala	Asn	Thr	Asn	Asn	Ala	Asn	Ala	Asn	Val	Ala	Tyr	Gly	
				1660					1665					1670		
	aac	agc	aac	cat	agc	aac	aac	cag	atg	ttt	tcc	agc	gtc	cac	tgt	5283
	Asn	Ser	Asn	His	Ser	Asn	Asn	Gln	Met	Phe	Ser	Ser	Val	His	Cys	
				1675					1680					1685		
20	gaa	agg	gag	ttc	ccg	gga	gag	gcg	gag	aca	ccg	gct	gcc	gga	cga	5328
	Glu	Arg	Glu	Phe	Pro	Gly	Glu	Ala	Glu	Thr	Pro	Ala	Ala	Gly	Arg	
				1690					1695					1700		
	gga	gcc	ctc	agc	cac	tcc	cac	agg	gcc	ctg	gga	cct	cac	agc	aag	5373
	Gly	Ala	Leu	Ser	His	Ser	His	Arg	Ala	Leu	Gly	Pro	His	Ser	Lys	
				1705					1710					1715		
25	ccc	tgt	gct	gga	aaa	ctg	aat	ggg	cag	ctg	gtc	cag	ccg	ggg	atg	5418
	Pro	Cys	Ala	Gly	Lys	Leu	Asn	Gly	Gln	Leu	Val	Gln	Pro	Gly	Met	
				1720					1725					1730		
	ccc	atc	aac	cag	gca	cct	cct	gcc	ccc	tgc	cag	cag	cct	agc	acg	5463
30	Pro	Ile	Asn	Gln	Ala	Pro	Pro	Ala	Pro	Cys	Gln	Gln	Pro	Ser	Thr	
				1735					1740					1745		
	gat	ccc	cca	gag	cgc	ggg	cag	agg	agg	acc	tcc	ctg	aca	ggg	tct	5508
	Asp	Pro	Pro	Glu	Arg	Gly	Gln	Arg	Arg	Thr	Ser	Leu	Thr	Gly	Ser	
				1750					1755					1760		
35	ctg	caa	gac	gaa	gca	ccc	cag	agg	agg	agc	tcc	gag	ggg	agc	acc	5553
	Leu	Gln	Asp	Glu	Ala	Pro	Gln	Arg	Arg	Ser	Ser	Glu	Gly	Ser	Thr	
				1765					1770					1775		
	ccc	agg	cgc	ccg	gct	cct	gct	aca	gct	ctg	ctg	atc	caa	gag	gct	5598
	Pro	Arg	Arg	Pro	Ala	Pro	Ala	Thr	Ala	Leu	Leu	Ile	Gln	Glu	Ala	
				1780					1785					1790		
40	ctg	gtt	cga	ggg	ggc	ctg	gac	acc	ttg	gca						

ccg gag gaa gta gag gtc gca gcc aca gag cta ctg aaa gcg cga 5733
Pro Glu Glu Val Glu Val Ala Ala Thr Glu Leu Leu Lys Ala Arg
1825 1830 1835

5 gag tct gtc cag ggc atg gcc agt gtc ccg gga agc ctg agc cgc 5778
Glu Ser Val Gln Gly Met Ala Ser Val Pro Gly Ser Leu Ser Arg
1840 1845 1850

agg tcc tcc ctg ggc agc ctt gac cag gtc cag ggc tcc cag gaa 5823
Arg Ser Ser Leu Gly Ser Leu Asp Gln Val Gln Gly Ser Gln Glu
1855 1860 1865

10 acc ctt att cct ccc agg ccg tga tggctgtggt gtccacatga ccaaggcgag 5877
Thr Leu Ile Pro Pro Arg Pro
1870

agggacagtg cgtgcagaag ctccagccctg catggcagcc tccctctgtc tcagccctcc 5937
tgctgagctg gggcggtctg gaaccgcacc aggaagccag gagcctcccc tggccagcaa 5997

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25 Lys Lys Pro Leu Pro Glu Val Leu Pro Arg Pro Pro Arg Ala Leu Phe
20 25 30

Cys Leu Thr Leu Gln Asn Pro Leu Arg Lys Ala Cys Ile Ser Ile Val
35 40 45

Glu Trp Lys Pro Phe Glu Thr Ile Ile Leu Leu Thr Ile Phe Ala Asn
50 55 60

30 Cys Val Ala Leu Ala Val Tyr Leu Pro Met Pro Glu Asp Asp Asn Asn
65 70 75 80

Ser Leu Asn Leu Gly Leu Glu Lys Leu Glu Tyr Phe Phe Leu Thr Val
85 90 95

35 Phe Ser Ile Glu Ala Ala Met Lys Ile Ile Ala Tyr Gly Phe Leu Phe
100 105 110

His Gln Asp Ala Tyr Leu Arg Ser Gly Trp Asn Val Leu Asp Phe Ile
115 120 125

Ile Val Phe Leu Gly Val Phe Thr Ala Ile Leu Glu Gln Val Asn Val
130 135 140

Ile Gln Ser Asn Thr Ala Pro Met Ser Ser Lys Gly Ala Gly Leu Asp
145 150 155 160

5 Val Lys Ala Leu Arg Ala Phe Arg Val Leu Arg Pro Leu Arg Leu Val
165 170 175

Ser Gly Val Pro Ser Leu Gln Val Val Leu Asn Ser Ile Phe Lys Ala
180 185 190

10 Met Leu Pro Leu Phe His Ile Ala Leu Leu Val Leu Phe Met Val Ile
195 200 205

Ile Tyr Ala Ile Ile Gly Leu Glu Leu Phe Lys Gly Lys Met His Lys
210 215 220

Thr Cys Tyr Tyr Ile Gly Thr Asp Ile Val Ala Thr Val Glu Asn Glu
225 230 235 240

15 Lys Pro Ser Pro Cys Ala Arg Thr Gly Ser Gly Arg Pro Cys Thr Ile
245 250 255

Asn Gly Ser Glu Cys Arg Gly Gly Trp Pro Gly Pro Asn His Gly Ile
260 265 270

20 Thr His Phe Asp Asn Phe Gly Phe Ser Met Leu Thr Val Tyr Gln Cys
275 280 285

Ile Thr Met Glu Gly Trp Thr Asp Val Leu Tyr Trp Val Asn Asp Ala
290 295 300

Ile Gly Asn Glu Trp Pro Trp Ile Tyr Phe Val Thr Leu Ile Leu Leu
305 310 315 320

25 Gly Ser Phe Phe Ile Leu Asn Leu Val Leu Gly Val Leu Ser Gly Glu
325 330 335

Phe Thr Lys Glu Arg Glu Lys Ala Lys Ser Arg Gly Thr Phe Gln Lys
340 345 350

30 Leu Arg Glu Lys Gln Gln Leu Glu Glu Asp Leu Arg Gly Tyr Met Ser
355 360 365

Trp Ile Thr Gln Gly Glu Val Met Asp Val Glu Asp Leu Arg Glu Gly
370 375 380

Lys Leu Ser Leu Glu Glu Gly Gly Ser Asp Thr Glu Ser Leu Tyr Glu
385 390 395 400

5 Ile Glu Gly Leu Asn Lys Ile Ile Gln Phe Ile Arg His Trp Arg Gln
405 410 415

Trp Asn Arg Val Phe Arg Trp Lys Cys His Asp Leu Val Lys Ser Arg
420 425 430

10 Val Phe Tyr Trp Leu Val Ile Leu Ile Val Ala Leu Asn Thr Leu Ser
435 440 445

Ile Ala Ser Glu His His Asn Gln Pro Leu Trp Leu Thr His Leu Gln
450 455 460

Asp Ile Ala Asn Arg Val Leu Leu Ser Leu Phe Thr Ile Glu Met Leu
465 470 475 480

15 Leu Lys Met Tyr Gly Leu Gly Leu Arg Gln Tyr Phe Met Ser Ile Phe
485 490 495

Asn Arg Phe Asp Cys Phe Val Val Cys Ser Gly Ile Leu Glu Leu Leu
500 505 510

20 Leu Val Glu Ser Gly Ala Met Thr Pro Leu Gly Ile Ser Val Leu Arg
515 520 525

Cys Ile Arg Leu Leu Arg Leu Phe Lys Ile Thr Lys Tyr Trp Thr Ser
530 535 540

Leu Ser Asn Leu Val Ala Ser Leu Leu Asn Ser Ile Arg Ser Ile Ala
545 550 555 560

25 Ser Leu Leu Leu Leu Leu Phe Leu Phe Ile Ile Ile Phe Ala Leu Leu
565 570 575

Gly Met Gln Leu Phe Gly Gly Arg Tyr Asp Phe Glu Asp Thr Glu Val
580 585 590

30 Arg Arg Ser Asn Phe Asp Asn Phe Pro Gln Ala Leu Ile Ser Val Phe
595 600 605

Gln Val Leu Thr Gly Glu Asp Trp Asn Ser Val Met Tyr Asn Gly Ile
610 615 620

Met Ala Tyr Gly Gly Pro Ser Tyr Pro Gly Val Leu Val Cys Ile Tyr
625 630 635 640

5 Phe Ile Ile Leu Phe Val Cys Gly Asn Tyr Ile Leu Leu Asn Val Phe
645 650 655

Leu Ala Ile Ala Val Asp Asn Leu Ala Glu Ala Glu Ser Leu Thr Ser
660 665 670

10 Ala Gln Lys Ala Lys Ala Glu Glu Arg Lys Arg Arg Lys Met Ser Arg
675 680 685

Gly Leu Pro Asp Lys Thr Glu Glu Glu Lys Ser Val Met Ala Lys Lys
690 695 700

Leu Glu Gln Lys Pro Lys Gly Glu Gly Ile Pro Thr Thr Ala Lys Leu
705 710 715 720

15 Lys Val Asp Glu Phe Glu Ser Asn Val Asn Glu Val Lys Asp Pro Tyr
725 730 735

Pro Ser Ala Asp Phe Pro Gly Asp Asp Glu Glu Asp Glu Pro Glu Ile
740 745 750

20 Pro Val Ser Pro Arg Pro Arg Pro Leu Ala Glu Leu Gln Leu Lys Glu
755 760 765

Lys Ala Val Pro Ile Pro Glu Ala Ser Ser Phe Phe Ile Phe Ser Pro
770 775 780

Thr Asn Lys Val Arg Val Leu Cys His Arg Ile Val Asn Ala Thr Trp
785 790 795 800

25 Phe Thr Asn Phe Ile Leu Leu Phe Ile Leu Leu Ser Ser Ala Ala Leu
805 810 815

Ala Ala Glu Asp Pro Ile Arg Ala Glu Ser Val Arg Asn Gln Ile Leu
820 825 830

30 Gly Tyr Phe Asp Ile Ala Phe Thr Ser Val Phe Thr Val Glu Ile Val
835 840 845

Leu Lys Met Thr Thr Tyr Gly Ala Phe Leu His Lys Gly Ser Phe Cys
850 855 860

Arg Asn Tyr Phe Asn Ile Leu Asp Leu Leu Val Val Ala Val Ser Leu
865 870 875 880

5 Ile Ser Met Gly Leu Glu Ser Ser Thr Ile Ser Val Val Lys Ile Leu
885 890 895

Arg Val Leu Arg Val Leu Arg Pro Leu Arg Ala Ile Asn Arg Ala Lys
900 905 910

10 Gly Leu Lys His Val Val Gln Cys Val Phe Val Ala Ile Arg Thr Ile
915 920 925

Gly Asn Ile Val Leu Val Thr Thr Leu Leu Gln Phe Met Phe Ala Cys
930 935 940

Ile Gly Val Gln Leu Phe Lys Gly Lys Phe Phe Ser Cys Asn Asp Leu
945 950 955 960

15 Ser Lys Met Thr Glu Glu Glu Cys Arg Gly Tyr Tyr Tyr Val Tyr Lys
965 970 975

Asp Gly Asp Pro Thr Gln Met Glu Leu Arg Pro Arg Gln Trp Ile His
980 985 990

20 Asn Asp Phe His Phe Asp Asn Val Leu Ser Ala Met Met Ser Leu Phe
995 1000 1005

Thr Val Ser Thr Phe Glu Gly Trp Pro Gln Leu Leu Tyr Arg Ala
1010 1015 1020

Ile Asp Ser Asn Glu Glu Asp Met Gly Pro Val Tyr Asn Asn Arg
1025 1030 1035

25 Val Glu Met Ala Ile Phe Phe Ile Ile Tyr Ile Ile Leu Ile Ala
1040 1045 1050

Phe Phe Met Met Asn Ile Phe Val Gly Phe Val Ile Val Thr Phe
1055 1060 1065

30 Gln Glu Gln Gly Glu Thr Glu Tyr Lys Asn Cys Glu Leu Asp Lys
1070 1075 1080

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	Arg	Cys	Tyr	Ile	Pro	Lys	Asn	Pro	Tyr	Gln	Tyr	Gln	Val	Trp	Tyr
	1100						1105					1110			
5	Val	Val	Thr	Ser	Ser	Tyr	Phe	Glu	Tyr	Leu	Met	Phe	Ala	Leu	Ile
	1115						1120					1125			
	Met	Leu	Asn	Thr	Ile	Cys	Leu	Gly	Met	Gln	His	Tyr	His	Gln	Ser
	1130						1135					1140			
10	Glu	Glu	Met	Asn	His	Ile	Ser	Asp	Ile	Leu	Asn	Val	Ala	Phe	Thr
	1145						1150					1155			
	Ile	Ile	Phe	Thr	Leu	Glu	Met	Ile	Leu	Lys	Leu	Leu	Ala	Phe	Lys
	1160						1165					1170			
	Ala	Arg	Gly	Tyr	Phe	Gly	Asp	Pro	Trp	Asn	Val	Phe	Asp	Phe	Leu
	1175						1180					1185			
15	Ile	Val	Ile	Gly	Ser	Ile	Ile	Asp	Val	Ile	Leu	Ser	Glu	Ile	Asp
	1190						1195					1200			
	Thr	Phe	Leu	Ala	Ser	Ser	Gly	Gly	Leu	Tyr	Cys	Leu	Gly	Gly	Gly
	1205						1210					1215			
20	Cys	Gly	Asn	Val	Asp	Pro	Asp	Glu	Ser	Ala	Arg	Ile	Ser	Ser	Ala
	1220						1225					1230			
	Phe	Phe	Arg	Leu	Phe	Arg	Val	Met	Arg	Leu	Ile	Lys	Leu	Leu	Ser
	1235						1240					1245			
	Arg	Ala	Glu	Gly	Val	Arg	Thr	Leu	Leu	Trp	Thr	Phe	Ile	Lys	Ser
	1250						1255					1260			
25	Phe	Gln	Ala	Leu	Pro	Tyr	Val	Ala	Leu	Leu	Ile	Val	Met	Leu	Phe
	1265						1270					1275			
	Phe	Ile	Tyr	Ala	Val	Ile	Gly	Met	Gln	Met	Phe	Gly	Lys	Ile	Ala
	1280						1285					1290			
30	Leu	Val	Asp	Gly	Thr	Gln	Ile	Asn	Arg	Asn	Asn	Asn	Phe	Gln	Thr
	1295						1300					1305			

Phe Pro Gln Ala Val Leu Leu Leu Phe Arg Cys Ala Thr Gly Glu
1310 1315 1320

Ala Trp Gln Glu Ile Leu Leu Ala Cys Ser Tyr Gly Lys Leu Cys
1325 1330 1335

5 Asp Pro Glu Ser Asp Tyr Ala Pro Gly Glu Glu Tyr Thr Cys Gly
1340 1345 1350

Thr Asn Phe Ala Tyr Tyr Tyr Phe Ile Ser Phe Tyr Met Leu Cys
1355 1360 1365

10 Ala Phe Leu Ile Ile Asn Leu Phe Val Ala Val Ile Met Asp Asn
1370 1375 1380

Phe Asp Tyr Leu Thr Arg Asp Trp Ser Ile Leu Gly Pro His His
1385 1390 1395

Leu Asp Glu Phe Lys Ala Ile Trp Ala Glu Tyr Asp Pro Glu Ala
1400 1405 1410

15 Lys Gly Arg Ile Lys His Leu Asp Val Val Thr Leu Leu Arg Arg
1415 1420 1425

Ile Gln Pro Pro Leu Gly Phe Gly Lys Phe Cys Pro His Arg Val
1430 1435 1440

20 Ala Cys Lys Arg Leu Val Gly Met Asn Met Pro Leu Asn Ser Asp
1445 1450 1455

Gly Thr Val Thr Phe Asn Ala Thr Leu Phe Ala Leu Val Arg Thr
1460 1465 1470

Ala Leu Lys Ile Lys Thr Glu Gly Asn Phe Glu Gln Ala Asn Glu
1475 1480 1485

25 Glu Leu Arg Ala Ile Ile Lys Lys Ile Trp Lys Arg Thr Ser Met
1490 1495 1500

Lys Leu Leu Asp Gln Val Ile Pro Pro Ile Gly Asp Asp Glu Val
1505 1510 1515

30 Thr Val Gly Lys Phe Tyr Ala Thr Phe Leu Ile Gln Glu His Phe
1520 1525 1530

Arg Lys Phe Met Lys Arg Gln Glu Glu Tyr Tyr Gly Tyr Arg Pro
1535 1540 1545

Lys Lys Asp Thr Val Gln Ile Gln Ala Gly Leu Arg Thr Ile Glu
1550 1555 1560

5 Glu Glu Ala Ala Pro Glu Ile Arg Arg Thr Ile Ser Gly Asp Leu
1565 1570 1575

Thr Ala Glu Glu Glu Leu Glu Arg Ala Met Val Glu Ala Ala Met
1580 1585 1590

10 Glu Glu Arg Ile Phe Arg Arg Thr Gly Gly Leu Phe Gly Gln Val
1595 1600 1605

Asp Thr Phe Leu Glu Arg Thr Asn Ser Leu Pro Pro Val Met Ala
1610 1615 1620

Asn Gln Arg Pro Leu Gln Phe Ala Glu Ile Glu Met Glu Glu Leu
1625 1630 1635

15 Glu Ser Pro Val Phe Leu Glu Asp Phe Pro Gln Asp Ala Arg Thr
1640 1645 1650

Asn Pro Leu Ala Arg Ala Asn Thr Asn Asn Ala Asn Ala Asn Val
1655 1660 1665

20 Ala Tyr Gly Asn Ser Asn His Ser Asn Asn Gln Met Phe Ser Ser
1670 1675 1680

Val His Cys Glu Arg Glu Phe Pro Gly Glu Ala Glu Thr Pro Ala
1685 1690 1695

Ala Gly Arg Gly Ala Leu Ser His Ser His Arg Ala Leu Gly Pro
1700 1705 1710

25 His Ser Lys Pro Cys Ala Gly Lys Leu Asn Gly Gln Leu Val Gln
1715 1720 1725

Pro Gly Met Pro Ile Asn Gln Ala Pro Pro Ala Pro Cys Gln Gln
1730 1735 1740

30 Pro Ser Thr Asp Pro Pro Glu Arg Gly Gln Arg Arg Thr Ser Leu
1745 1750 1755

-258-

Thr Gly Ser Leu Gln Asp Glu Ala Pro Gln Arg Arg Ser Ser Glu
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Gly Ser Thr Pro Arg Arg Pro Ala Pro Ala Thr Ala Leu Leu Ile
1775 1780 1785

5 Gln Glu Ala Leu Val Arg Gly Gly Leu Asp Thr Leu Ala Ala Asp
1790 1795 1800

Ala Gly Phe Val Thr Ala Thr Ser Gln Ala Leu Ala Asp Ala Cys
1805 1810 1815

10 Gln Met Glu Pro Glu Glu Val Glu Val Ala Ala Thr Glu Leu Leu
1820 1825 1830

Lys Ala Arg Glu Ser Val Gln Gly Met Ala Ser Val Pro Gly Ser
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Leu Ser Arg Arg Ser Ser Leu Gly Ser Leu Asp Gln Val Gln Gly
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15 Ser Gln Glu Thr Leu Ile Pro Pro Arg Pro
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Gly Asn Val

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